

# FLIGHT

First Aero Weekly in the World.

Founder and Editor : STANLEY SPOONER.

A Journal devoted to the Interests, Practice and Progress of Aerial Locomotion and Transport.

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## Flight.

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### TO OUR READERS.

#### The Supply of "FLIGHT." Important Notice.

Order "FLIGHT" to be either delivered or reserved for you regularly.

As the demand for "FLIGHT" is so great each week, it is of the utmost importance that readers should place their orders *firmly* for copies of "FLIGHT" at the bookstalls, their newsagents, or direct from the publishers, at 44, St. Martin's Lane, W.C., if they wish to secure a copy every week and avoid disappointment. The stringent Government restrictions in regard to the supply of printing paper necessitates this precaution in order that only actual numbers required are printed, and all wastage by unsold copies may thereby be reduced to a minimum, if not eliminated.

THE PUBLISHERS.

### EDITORIAL COMMENT.



E proposed to publish in this issue the very much curtailed report of the Advisory Committee for Aeronautics for the year 1915-16. Want of space, however, has compelled us to hold it over until next week. In the meantime we would say that it contains little that was not already mentioned in the Report of the National Physical Laboratory, which we published in our issue of July 20th, when we commented upon the work done by that valuable institution, to as great an extent as is permissible

#### Air Research.

under existing conditions. Special attention may, however, be called to some of the experiments mentioned in the report of the Advisory Committee. For instance, the knowledge of the exact numerical relation between the full scale and model coefficients has been considerably increased by experiments in the wind channels of the range of values of  $vl/v$ , which should greatly help towards the ability to predict with a fair degree of exactitude the performance of full-sized machines from model figures.

In regard to the factor of safety of six called for by the authorities, it has been found desirable in some cases to employ a lower factor in order to obtain "safety of a different kind," as, for instance, we presume, ability to quickly climb out of the range of anti-aircraft guns. It is stated in the report that instruction and information as to the calculation of strength, which demands still greater precision with the lower factor of safety, has been freely given to constructors and designers. In this connection it might be pointed out that there have been built machines by private firms that possessed the "factor of safety of a different kind," but the performance of which was greatly hampered, not to say spoilt, by official insistence on a higher theoretical factor of safety, although no case is on record of any of these machines ever breaking in the air even before being strengthened to comply with official requirements. However, it is now apparently officially recognised that a machine with a factor of safety of say, three, capable of climbing out of gun range, may actually be safer than one possessing the required factor of safety of six, but being too heavy to reach a reasonably safe altitude in the time disposable.

Although not occurring together in the report, and possibly having no connection, there are two remarks

which appear to indicate investigations of the greatest importance. One is to the effect that two new devices are being tested for improving the performance at heights, and the other states that special tests have been made on the use of air-screws of variable pitch. The importance of developments in this direction can scarcely be exaggerated. It will be obvious to anyone having the slightest knowledge of the fundamental principles of aviation that if means can be devised for enabling an aero engine to develop its full power at great altitudes, a step will have been made in the right direction, since this is equivalent to saying that the aeroplane will be capable of travelling considerably faster owing to the less density of the air at altitudes. It is equally evident that if full advantage is to be taken of the capability on the part of the engine to maintain its power some form of variable pitch propeller will have to be evolved. It is therefore highly gratifying to find that this important problem is receiving the attention of the authorities. The remainder of the contents of the Report does not, we think, call for any particular comment.

## Counsels of Perfection.

Once again the fetish has been raised of forbidding, by mutual agreement of the nations of the world, the use of aircraft after the present war has run its weary allotted span. This time the pleading note is sounded in quite a new—and unexpected—quarter. It comes from so sound a thinker and writer as Mr. H. F. Prevost Battersby, whose graphic pen pictures from out yonder are, or should be, well in the mind of "FLIGHT" readers. None the more the plea is just as impossible of realisation as if it came through the usual crank channels. As well, as of old, propose to push the waves of the sea back as imagine that so far-reaching and so fascinating a problem as the subjugation of the element of the air to man's will, is to be stayed at the instigation of any section of the world's peoples. Without question there can hardly be an individual in this sphere of ours, after the awful happenings of the past two years, but would gladly subscribe to any formula that would once and for all time abolish wars from amongst future generations' earnings. But to bring such an ideal state of things into being is now as ever an impossibility. It is not in the remotest sense of the word even an improbability. It is and will remain an impossibility. The task which any reformer in this direction must first set himself to attain is to alter human nature, and when he has accomplished this little variation of the laws of evolution, those remaining in the world may begin to believe that at last there may be reality in the dream which century after century in different forms has passed through the minds of so many men—great ones as well as mere cranks—the dawn of the day of eternal worldly peace. For ourselves we have not so imbibed the kultured teachings in this war of the Germanic barbarians as to engender

any confidence in their respecting laws and agreements, whether they be of God or man, as to justify the rest of the world laying aside the only "peaceful" weapon of any consequence to them—the peaceful implement of might, superior and unassailable. Nothing except absolute domination of their brute-beast nature can or ever will appeal to the German blood-saturated criminals, and it is only by restraining power wielded with the most insistent and unyielding impartiality that will earn the respect of these self-convicted ruffians. Nothing in the world would give the Huns greater joy than to see such an idyllic state of affairs promulgated. They would, in their shocking hypocrisy, be the first to rejoice in God's great goodness in thus ensuring peace and goodwill for future generations—and before they had well gotten outside the precincts of the Peace Court forthwith plan and work to but one end, the building up in cunning secrecy of a fleet of aircraft so great and irresistible as to, in a not far distant period of the world's history, win them back not only all they have lost, and are to lose, through the letting loose by them of the war dogs of rapine and devastation, but they would secure such initial advantage as to probably make the rest of the world's task to once again right civilisation, an even more hideous undertaking than the holocaust of the present world's crime. No; to ensure to the world in the years to come an honourable peace, the world's rulers must be in the position to promptly punish any attempt at the violation of the canons of civilised nations. To that end it is not only imperative that the power and means of "policing" efficiently the criminally inclined classes of different nationalities should be in the hands of well-trying representatives of the Races of the World, but that those means should be physically unchallengable. A world's court of justice, with the right to condemn without the power to see that its sentence is carried out, would be about on a par with the Germans' ideas of smashing up and neutralising the British blockade of the Central Empires, by navigating one of their *Untersee* "merchantmen" over to America and back. Our only option after the war is to see that we are as strong in the air as we are at sea, and with proper provision and security for firmly chaining the mad dog of Europe down to his kennel for a century at least, there are just the germs of a possibility that the worst rabidness of the bloodthirsty Prussian maniacs may thereby be sufficiently subdued as to make it possible for their being readmitted to a seat at the council of the world's civilisation. The more awful the instrument by which such a peace for future generations is ensured the more certain is it that that instrument will be effective in attaining its object. Therefore shall we look to the development of the air element as the ultimate saviour of the world from a repetition of the ghastly nightmare which has afflicted the major portion of the inhabitants of this globe for a hundred weeks and more.

## Exhibitions in New York and Chicago.

AN Aircraft and Aero-motor exposition and trade congress is to be held in the Grand Central Palace, New York, from Sept. 10th to 16th inclusive. The exhibition, as well as one which it is proposed to hold at Chicago in December, will be conducted under the auspices of the National Aircraft and Motor Manufacturers' Association, which is in process of formation.

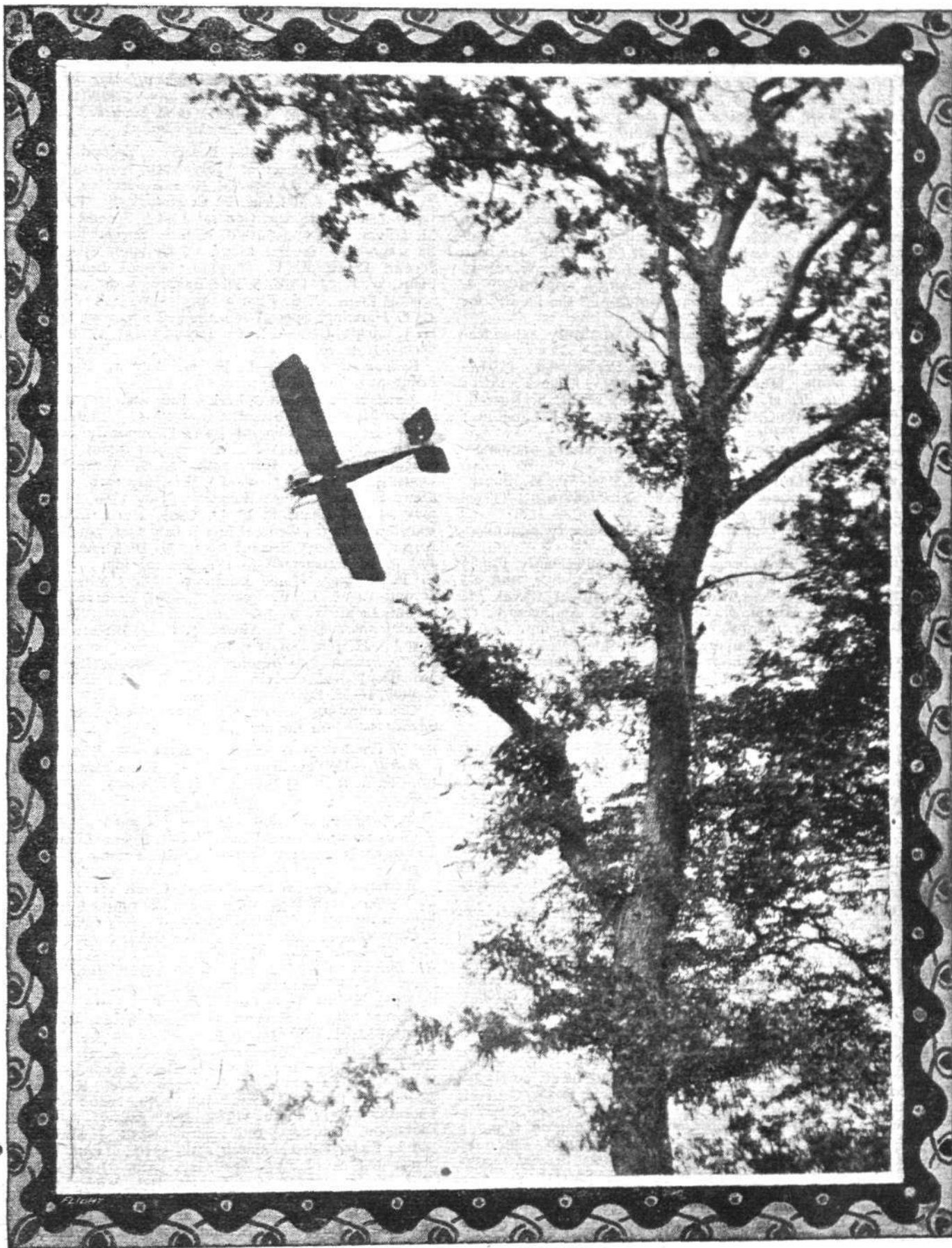
## An Aerial Reserve for America.

REPRESENTATIONS at Washington by the Aero Club of America appear to be arousing the interest of President Wilson and the Secretary for War in aviation. To supply the personnel for the increased air service demanded the President has signed an order authorising the formation of an Officers' Reserve Corps and an Enlisted Men's Reserve Corps. Details of the scheme have not yet been published.



AUGUST 17, 1916.

FLIGHT



"DOING SOMETHING FOR MOTHER."—Mr. Sykes on the Martinsyde making a heavily banked turn over the trees at Hanworth Park on "Mothers' Day."

# The British Air Service

"PER ARDUA AD ASTRA"

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

## Royal Naval Air Service.

THE following appeared among the Admiralty announcements of August 8th:—

Temporary Lieutenant (R.N.V.R.): H. Jullerot, entered as Fleet-Lieutenant (Temporary), seniority August 4th, and appointed to "President," additional, for R.N.A.S. Temporary commissions as Sub-Lieutenant (R.N.V.R.) have been granted to Temporary Warrant Telegraphist E. W. Sharp (R.N.R.) and A. D. Macdonald, seniority respectively of August 5th and 7th, and both appointed to "President," for R.N.A.S.

The following appeared among the Admiralty announcements of August 10th:—

The following have been entered as Probationary Flight-Sub-Lieutenants (Temporary), seniority, August 13th: T. K. Thyne, R. H. Daly, E. Huggan, N. M. S. Russell, A. J. B. Tonks, W. G. Little, F. H. Hudson, E. J. Land, and T. C. Pattinson.

The following appeared among the Admiralty announcements of Aug. 11th:—

Temporary Sub-Lieutenant (R.N.V.R.)—W. M. Smith, entered as Probationary Flight Sub-Lieutenant (Temporary), seniority Aug. 10th.

The following appeared among the Admiralty announcements of Aug. 14th:—

The following have been entered as probationary Flight Sub-Lieutenants (Temporary), seniority Aug. 6th, and all appointed to President, additional, for Royal Naval Air Service: C. E. Martin, N. C. Harrison, G. Andrews, E. C. Hilleby, L. C. J. Barlow, A. R. Stack, P. Johnson, and L. J. N. Mackay. Temporary commissions (Royal Naval Volunteer Reserve) have been granted to the undermentioned, with seniority as follows: Lieutenants—W. N. Goldsmith and W. J. Fernie, Aug. 12th; Sub-Lieutenants—C. F. Yeomans (Chief Petty Officer), Aug. 10th; C. D. Butler and C. G. Ashton, Aug. 12th.

## Royal Flying Corps (M.W.).

THE following appeared in the London Gazette of August 8th:—

**Equipment Officers** (from Assistant Equipment Officers, and to be Temporary Captains whilst so employed).—July 1st, 1916: Temporary Lieut. G. L. Wightman, General List; Lieut. G. S. Peacock, Special Reserve. Temporary Lieut. A. R. Earle, General List; July 15th, 1916. Second Lieut. E. S. Perrin, Special Reserve; July 20th, 1916. Temporary Lieut. A. M. C. Scott, Lond. R. (T.F.); July 25th, 1916.

**Flying Officers.**—Second Lieut. E. L. Lewis, Essex, R. (T.F.); June 10th, 1916. Temporary Lieut. W. Stobart, Durh. L.I., and to be transferred to the General List; June 23rd, 1916. June 28th, 1916: Temporary Capt. J. C. M. Hay, Motor Machine Gun Serv., and to be transferred to the General List; Capt. G. W. D. Allen, L'pool R., Special Reserve, and to be seconded. Lieut. G. H. Bowerman, R. War. R., Special Reserve, and to be seconded; June 29th, 1916. June 30th, 1916: Lieut. W. R. B. Gifford, Middx. R., Special Reserve, and to be seconded. Lieut. J. W. Yuille, Canadian General List. Temporary Second Lieut. C. H. B. Readman, Durh. L.I., and to be transferred to the General List. July 12th, 1916: Second Lieut. R. P. Atwood, Special Reserve; Temporary Second Lieut. W. H. Longton, General List. Lieut. (Temporary Capt.) E. A. Beaulah, Linc. R. (T.F.); July 13th, 1916. July 14th, 1916: Second Lieut. (on probation) O. W. Morgan, R.F.A., Special Reserve. Second Lieut. P. Thompson, Special Reserve; Second Lieut. E. J. Henderson, Special Reserve. July 15th, 1916: Temporary Capt. H. J. Petty, Welsh R., and to be transferred to the General List; Temporary Second Lieut. W. Hargreaves, General List, from a Flying Officer (Observer); Second Lieut. F. D. Holder, E. Kent R., and to be seconded; Second Lieut. H. Hulbert, Special Reserve; Second Lieut. H. V. Puckridge, Shrops. L.I., and to be seconded; Second Lieut. A. P. M. Sanders, North'd. Fus., and to be seconded; Second

Lieut. N. Cooper, Special Reserve; Second Lieut. H. A. Rigby, Special Reserve. July 16th, 1916: Capt. R. E. Wilson, Hamps. R., Special Reserve, and to be seconded; Temporary Second Lieut. H. C. Mulock, S. Staff. R., and to be transferred to the General List; Second Lieut. K. C. McCallum, Arg. and Suth'd. Highrs., Special Reserve, and to be seconded; Second Lieut. C. Holland, Special Reserve; Second Lieut. F. E. Sargood, Special Reserve; Second Lieut. W. K. M. Britton, R. Muns. Fus., and to be seconded; Second Lieut. C. E. Finlay, Special Reserve; Second Lieut. J. T. Hanning, Special Reserve; Temporary Second Lieut. H. J. Larkin, General List; Second Lieut. W. F. Williamson, Special Reserve.

**Balloon Officer.**—Capt. H. M. Meyler, Bord. R., from Adjutant; June 26th, 1916.

**Assistant Equipment Officers.**—July 10th, 1916: Temporary Second Lieut. E. J. Street, General List; Temporary Second Lieut. H. Jones, General List; Temporary Second Lieut. J. H. Winch, General List. Second Lieut. F. Ashforth, Special Reserve; July 12th, 1916. Temporary Second Lieut. S. G. Young, General List; July 17th, 1916. Second Lieut. S. Clark, Special Reserve; July 19th, 1916. Temporary Second Lieut. S. E. H. Orde, Durh. L.I., and to be transferred to the General List; July 21st, 1916. July 24th, 1916: Temporary Second Lieut. D. Blairman, North'n. R., and to be transferred to the General List; Second Lieut. E. F. Warner, Home Counties Divl. Cyclist Co. (T.F.); Second Lieut. L. F. Peaty, Special Reserve; Temporary Second Lieut. N. K. Johnson, General List; Second Lieuts., Special Reserve, A. B. Albert, T. E. H. Bristow, A. L. Cockburn, F. H. Jones, A. Young.

**Supplementary to Regular Corps.**—Second Lieutenants (on probation) confirmed in their rank: M. M. Sisley, S. W. Carline, R. H. Edwards, S. Clark.

The following appeared in a supplement to the London Gazette issued on August 9th:—

## Temporary Appointments made at the War Office.

**A.A.G.**—Brevet Lieut.-Col. F. H. Sykes, C.M.G., 15th Hrs., from an A.A. and Q.M.G.; June 9th, 1916.

## Establishments.

**Staff Officer, 3rd Class** (graded for purposes of pay as a Staff Captain).—Second Lieut. T. M. Eggar, Lond. R. (T.F.), and to be Temporary Captain whilst so employed; July 7th, 1916.

**Squadron Commander.**—Second Lieut. (Temporary Capt.) L. Parker, 15th Hrs., from a Flight-Commander, and to be Temporary Major whilst so employed; July 1st, 1916.

**Flight-Commanders** (from Flying Officers, and to be Temporary Captains whilst so employed).—Lieut. C. J. Hart, Worc. R., Special Reserve; July 16th, 1916. July 21st, 1916: Lieut. J. H. Simpson, Special Reserve; Second Lieut. R. H. G. Neville, D. of Corn. L.I.

**Flying Officer.**—Temporary Second Lieut. R. G. Fraser, General List; July 5th, 1916.

**Flying Officers (Observers).**—Lieut. G. A. R. Spain, 103rd Mahratta L.I., Ind. Army; Dec. 1st, 1915. Lieut. (Temporary Capt.) J. O. C. Orton, Norf. R., and to be seconded; Jan. 1st, 1916. Jan. 10th, 1916: Capt. J. W. Thomson-Glover, 35th Sikhs, Ind. Army; Lieut. T. M. Dickinson, 16th Cav., Ind. Army; Lieut. J. Mitchell, R.A., and to be seconded; March 15th, 1916. Lieut. C. T. Sanctuary, R.F.A. (T.F.); April 1st, 1916. July 26th, 1916: Capt. F. H. Mardall, 41st Dogras, Ind. Army; Capt. B. S. Lyon-Williams, Wilts. R., Special Reserve, and to be seconded; Lieut. T. E. Withington, Oxf. and Bucks. L.I., and to be seconded; Temporary Second Lieut. C. L. Blake, Army Cyclist Corps, and to be transferred to the General List; Temporary Second Lieut. H. G. Bellamy, Worc. R., and to be transferred to the General List; Second Lieut. L. G. H. Vernon, R. W. Fus., and to be seconded; Temporary Second Lieut. J. A. Turnbull, General List; Lieut. C. B. Wainwright, R.A., and to be seconded; Temporary Second Lieut.



C. G. Holman, Army Cyclist Corps, and to be transferred to the General List; Temporary Second Lieut. G. R. Simpson, R.A., and to be transferred to the General List; Temporary Second Lieut. A. Broomer, R. Lanc. R., and to be transferred to the General List; Temporary Second Lieut. F. H. Bickerton, Machine Gun Corps, and to be transferred to the General List.

*Memoranda.*—Warrant N.C.Os. and men to be Temporary Second Lieutenants (on probation) for duty with the R.F.C.—July 12th, 1916: Flight-Sergt. H. L. Woolveridge, from R.F.C.; Pte. S. A. Gibbons, from A.S.C. July 13th, 1916: L.-Corpl. G. Allen, from Surrey Yeo. (T.F.); L.-Corpl. A. J. Cathie, from A.S.C. Acting Sergt.-Major H. McKenna, from R.F.C.; July 15th, 1916. July 20th, 1916: Corpl. K. E. Tulloch, from R.E.; Corpl. G. K. Weisford, from R.E. To be Temporary Second Lieutenants: Sergt. A. D. Goodwin, from R.F.C., for duty with the Military Wing of that Corps; July 15th, 1916. Lieut. A. G. T. Applin, from R.N.V.R., for duty with R.F.C.; July 17th, 1916.

The following appeared in a supplement to the *London Gazette* issued on Aug. 10th:—

*Flying Officer.*—Temporary Second Lieut. J. R. Herbert, General List, relinquishes his appointment on ceasing to be employed; June 26th, 1916.

*Appointments made: Flying Officers (Observers).*—Temporary Second Lieut. C. Pilkington, Shrops. L.I.; July 15th, 1916. July 16th, 1916: Lieut. F. J. H. Manville, 28th Canadian Inf. Bn.; Lieut. F. R. G. Milton, R.A., and to be seconded. July 17th, 1916: Temporary Lieut. J. C. Jervis, R. Fus., and to be transferred to the General List; Temporary Second Lieut. (Temporary Lieutenant) G. L. Sly, Yorks. L.I., and to be transferred to the General List; Temporary Second Lieut. T. H. Trew, York and Lanc. R., and to be transferred to the General List. July 19th, 1916: Lieut. T. R. Duff, Arg. and Sutthd. Highrs., Special Reserve,

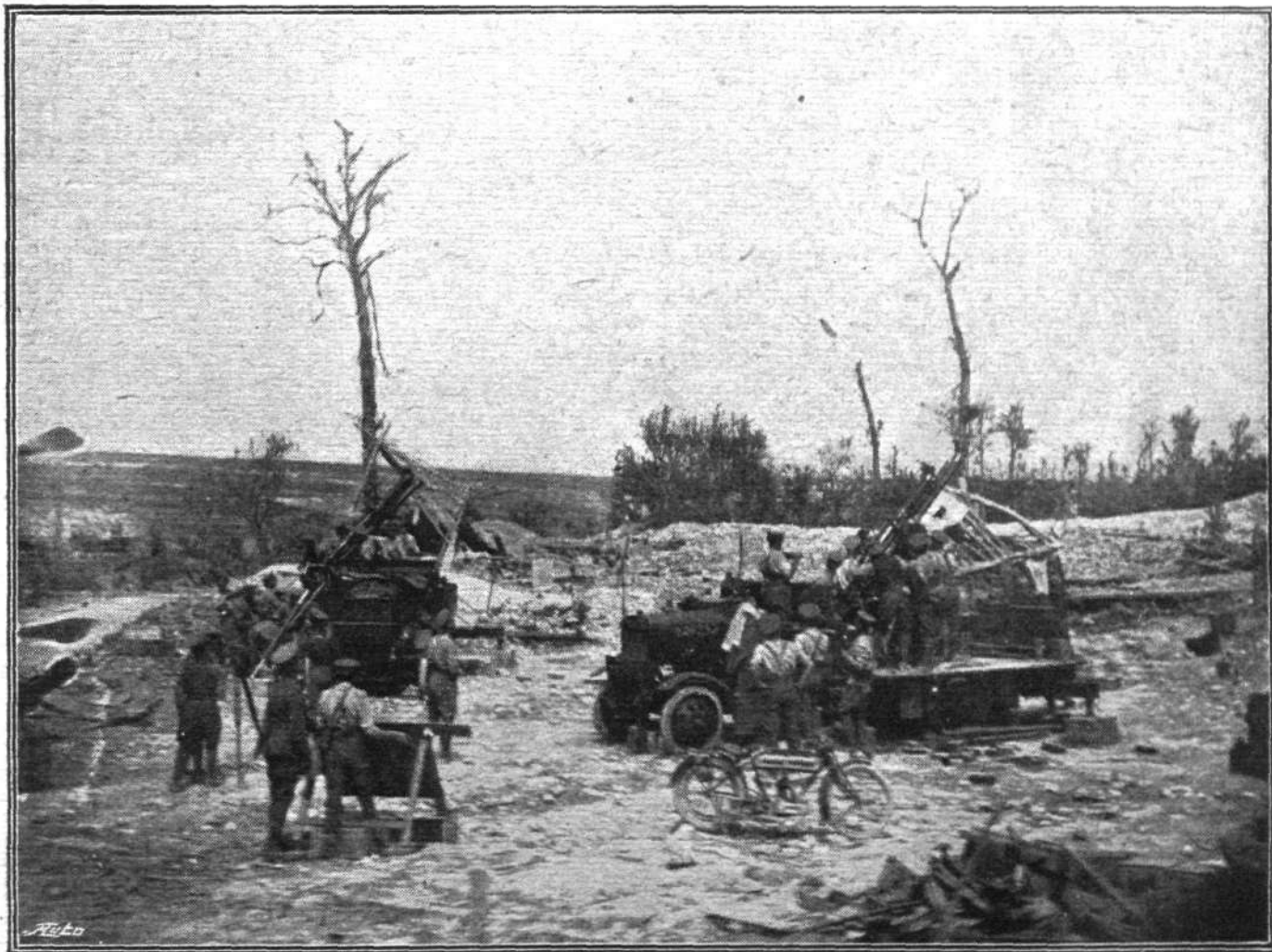
and to be seconded; Temporary Second Lieut. H. Cockerell, General List; Lieut. H. H. Whitehead, 31st Canadian Inf. Bn.; July 20th, 1916. Second Lieut. A. G. C. Dann, N. Lanc. R. (T.F.), from Machine Gun Corps; July 25th, 1916.

*Memoranda.*—Temporary Second Lieutenants, transferred to the General List, and to be Temporary Lieutenants whilst employed with R.F.C.:—June 1st, 1916: E. B. A. Rayner, E. Kent R.; W. T. Blake, Oxf. and Bucks L.I.; J. G. Will, Leins. R. July 1st, 1916: G. B. A. Baker, R. Berks. R.; W. A. W. Hallam, A.S.C.; G. B. Crole, R.A.F.; R. Bell-Irving, R.E.; H. A. V. Hill, A.S.C.; D. M. Deighton, A.S.C.

Second Lieutenants to be Temporary Lieutenants whilst employed with R.F.C.:—June 1st, 1916: R. C. L. Holme, Som. L.I.; W. H. Day, Hamps. R.; I. H. D. Henderson, Arg. and Sutthd. Highrs.; M. G. Begg, Rif. Brig.; L. Moss, A.S.C.; J. E. Evans, R.W. Fus.; M. Jacks, E. Lanc. R.; D. O. Mulholland, Conn. Rang., Special Reserve; C. E. M. Pickthorn, A.S.C., Special Reserve; F. A. Hunter, R.F.A., Special Reserve; T. S. Roadley, S. Staff. R., Special Reserve, July 1st, 1916: A. T. Rickards, R.G.A.; G. C. Levick, K.R. Rif. C.; A. L. Neale, Linc. R.

Temporary Second Lieutenants, to be Temporary Lieutenants whilst employed with R.F.C.:—June 1st, 1916: N. B. Fuller, J. Sowrey, A. D. Broughton, F. G. Saunders, L. G. Paget, W. Bailie, H. T. Horsfield, A. T. Wynyard-Wright, J. A. Barton, G. S. Inglis, H. F. Bradley, H. N. Charles, I. G. Davies, G. M. Goode, O. J. F. Scholte, A. W. Keen, E. J. Howard. July 1st, 1916: O. L. Owen, G. A. N. Mitchell, R. Fus.; C. Pilkington, Shrop. L.I.

Second Lieutenants (on Probation), Special Reserve, to be Temporary Lieutenants whilst employed with R.F.C.:—L. Walmsley, E. Yorks. R., and to be seconded; June 1st, 1916. July 1st, 1916: H. R. Jaques, S. Staffs. R.; D. M. Tidmarsh, R. Ir. Regt.; W. T. Coles, Oxf. and Bucks. L.I.; W. J. Shields, Essex R.; R. D. Vavasour, R.F.A.



(Official Photo. issued by the Press Bureau.)  
Anti-aircraft guns busy on a Hun plane during the British push in the West.

Second Lieutenants, Special Reserve, to be Temporary Lieutenants whilst serving with R.F.C.:—July 1st, 1916: G. H. B. Streatfeild, Durh. L.I.; J. E. Burt, Midd'x. R.; D. D. G. Hall, York. R.

Second Class Air-Mechanic Allan MacKay, from R.F.C., to be Temporary Second Lieutenant for duty with the Mil. Wing of the Corps; July 15th, 1916.

To be Temporary Second Lieutenants for duty with R.F.C.:—Cadet James G. Vecqueray, from No. 2 Officer Cadet Bn., Pembroke Coll.; July 8th, 1916. Private Arthur G. Cox, from Inns of Court O.T.C.; July 18th, 1916. Second Class Air-Mechanic P. M. H. Currie, from Hampshire Aircraft Park (T.F.); July 20th, 1916. Aug. 5th, 1916: Pte. R. T. Whitney, from Liverpool R.; Corpl. E. R. Pennell, from H.A.C. (T.F.); Sergt. H. H. Maddocks, from Berkhamsted Sch. O.T.C.; Corpl. G. R. G. Smeddie, from Loretto Sch. O.T.C.; L.-Corpl. H. C. Duxbury, from Merchant Taylors' Sch. O.T.C.; L.-Cpl. B. Mews, from Harrow Sch. O.T.C.; Cadet A. C. Sanderson, from Dulwich Coll. O.T.C.; Sergt. A. C. Tremellen, from Highgate Sch. O.T.C.; Co. Sergt.-Maj. E. P. Wykes, from Christ's Hosp. O.T.C.; L.-Corpl. Vaughan F. Williams, from Rugby Sch. O.T.C.; L.-Corpl. R. W. P. Goodwin, from Brighton Coll. O.T.C.; Corpl. D. C. H. MacBrayne, from Eton Coll. O.T.C.; Sergt. R. H. Ayre, from Leys Sch. O.T.C.; Pte. A. R. Harris, from Inns of Court O.T.C.; L.-Corpl. R. M. Marsh, from H.A.C. (T.F.); Corpl. A. E. P. Smith, from H.A.C. (T.F.); Pte. T. V. Villiers, from Inns of Court O.T.C.; Pte. Alexander B. Anstey, from Inns of Court O.T.C.; Sergt. M. C. Ellis, from Radley Coll. O.T.C.

*Supplementary to Regular Corps.*—The notification in the *Gazette* of June 22nd, 1916, regarding the appointment to a Second Lieutenancy of A. H. Smith is cancelled.

The Christian names of Second Lieut. (on probation) Henry Douglas Forbes Fraser are as now described, and not as in the *Gazette* of July 29th, 1916.

Second Lieutenants (on probation) confirmed in their rank: E. G. Manuel, R. E. Dangerfield, W. K. Trollope, W. Buckingham.

To be Second Lieutenants (on probation): A. W. Crombie; July 10th, 1916. C. S. Hickie; July 26th, 1916. J. M. Heesem; July 27th, 1916. Aug. 1st, 1916: Alfred E. Venables, P. G. Ashford, J. Smyth, J. G. Thompson, H. S. Jackson, F. C. Berkley, A. L. Constabel, H. Haycock, V. H. Adams, L. B. Clarkson, C. Musgrave, H. E. Martin, V. S. H. Abbott, D. N. Robertson, H. B. Begg, E. Christmas, E. B. Smyth, T. R. Field, W. J. Pike, G. N. B. Baynes, H. Blofeld, R. W. Jones, A. C. Young, J. C. Young, W. F. B. Broomhall, C. H. White, F. R. Lucas, W. L. Winstanley. Aug. 5th, 1916: L. H. Gibbon, J. E. Edgar, A. B. Davidson, H. C. Leigh, A. V. H. Gompertz, T. D. Bracken, G. S. Deane.

The following appeared in the *London Gazette* of Aug. 11th:—

*Memorandum.*—The undermentioned to be Temporary Second Lieutenant: Sapper A. Hutchison, from Clifton Coll. O.T.C., for duty with R.F.C.; Aug. 5th, 1916.

The following appeared in a supplement to the *London Gazette* issued on Aug. 12th:—

*Flight-Commanders.*—From Flying Officers, and to be Temporary Captains while so employed: Second Lieut. D. O. Mulholland, Conn. Rang., Special Reserve; July 25th, 1916. 2nd Lieut. J. Minot, Special Reserve; July 28th, 1916. Temporary Lieut. D. Wilson, General List; July 29th, 1916. July 30th, 1916: Lieut. C. J. W. Darwin, C. Gds.; Temporary Second Lieut. K. N. Pearson, General List.

*Memorandum.*—Second Lieut. C. W. Short, Indian Army Reserve of Officers, to be Temporary Lieutenant whilst serving with R.F.C.; July 1st, 1916.

The following appeared in a supplement to the *London Gazette* issued on Aug. 14th:—

*Wing Commander.*—Capt. (Temporary Major) A. E. Borton, D.S.O., R. Highrs., from a Squadron Commander, and to be Temporary Lieutenant-Colonel whilst so employed; Aug. 1st, 1916.

*Flying Officers.*—Second Lieut. E. G. Manuel, Special Reserve; July 1st, 1916. Second Lieut. E. A. Lloyd, R.N., Devon Yeo. (T.F.); July 17th, 1916. Lieut. T. E. Blackater, R. Lanc. R., Special Reserve, and to be seconded; July 19th, 1916. July 20th, 1916: Second Lieut. (Temporary Lieut.) H. C. Naldrett, Essex R. (T.F.); Second Lieut. E. W. Capper, Montgomeryshire Yeo. (T.F.); Temporary Second Lieut. R. V. Franklin, R. Lanc. R., and to be transferred to the General List; Second Lieut. R. E. Dangerfield, Special Reserve; Second Lieut. C. N. Russell, Special Reserve. July 21st, 1916: Second Lieut. C. G. Shaumer, Lond. R. (T.F.); Second Lieut. A. Ball, R. Lanc. R., Special Reserve, and to be seconded. Second Lieut. W. K. Trollope, Special Reserve; Lieut. (Temporary Capt.) H. W. G. Jones, Welsh R. (T.F.); July 22nd, 1916. July 23rd, 1916: Second Lieut. G. L. Backhouse, Norf. R. (since deceased), and to be seconded; Second Lieut. W. Buckingham, Special Reserve; Second Lieutenant (Temporary Lieut.) A. R. Boeree, Suff. R., (T.F.); July 24th, 1916.

*Assistant Equipment Officers.*—Temporary Second Lieut. E. A. Gulson, General List; June 14th, 1916. Second Lieut. (Temporary Capt.) P. L. Hunting, North'd Fus. (T.F.); July 11th, 1916. Temporary Second Lieut. F. Petch, General List; July 12th, 1916.

*Memoranda.*—To be temporary Second Lieutenants for duty with R.F.C.:—Aug. 8th, 1916: Staff-Sergt. C. A. F. Rogers, from Lond. Field Amb. (T.F.); L.-Corpl. G. Carpenter, from A.S.C., M.T.; Cadet A. Travers, from Man. Univ. O.T.C.; L.-Corpl. R. N. Swann, from 6th Australian Light Horse; Pte. E. J. Smart, from Univ. of Lond. O.T.C.; Cadet F. S. Potts, from Artists Rif. O.T.C. From Inns of Court O.T.C.: Pte. G. N. Brockhurst, Pte. L. E. Vine, Pte. C. K. Tait, Pte. D. F. Cox, Pte. G. H. S. Cregeen, L.-Corpl. J. B. Hine, Pte. R. H. S. Hunter, Pte. D. S. C. Newton.

*Supplementary to Regular Corps.*—Second Lieutenants (on probation) confirmed in their rank: R. T. Griffin, E. J. Smyth, H. S. Pell, E. M. Wright, G. J. Harter, E. S. T. Cole.

To be Second Lieutenants (on probation): C. Clarke; July 25th, 1916. Andrew C. Kiddie; Aug. 1st, 1916.

## THE ROLL OF HONOUR.

THE Secretary of the Admiralty announces the following casualties:—

### Injured (AUGUST 8TH).

Flight-Lieut. J. S. Mills, D.S.C., R.N.

### (AUGUST 10TH).

Flight-Sub-Lieut. A. O. Brissenden, R.N.

### Accidentally Injured (AUGUST 12TH).

Flight-Lieut. T. C. Vernon, R.N.

### Slightly Injured (AUGUST 5TH).

Probationary Flight-Sub-Lieut. D. G. Donald, R.N.

### Previously reported Missing, now Unofficially reported Prisoners of War in Germany.

Flight-Sub-Lieut. F. J. Bailey, R.N.

Sub-Lieut. F. W. Mardock, R.N.V.R.

The following casualties have been officially announced by the War Office:—

### Killed.

Second Lieut. H. C. Davis, R. Berks R., attd. R.F.C.

### Died of Wounds.

Lieut. M. T. Vaughan-Lewes, Welsh R., attd. R.F.C.

### Previously reported Missing, now Unofficially reported Killed.

Second Lieut. C. Monckton, R. Irish Fus. and R.F.C.  
Second Lieut. C. I. Sandys-Thomas, Royal Flying Corps.

### Previously reported Missing, now reported Died of Wounds as a Prisoner of War.

Lieut. C. H. Cox, Royal Flying Corps.

### Died.

Second Class Air Mech. C. Bramall, 11646.  
Second Class Air Mech. C. Brown, 18369.  
Second Class Air Mech. P. Gorrings, 17399.  
Second Class Air Mech. W. Smith, 3393, R.F.C.

### Previously reported Missing, now reported by the German Government Killed or Died of Wounds.

First Class Air Mech. J. W. Newton, 3098, R.F.C.

### Wounded.

Second Lieut. F. H. Bickerton, Machine Gun Corps, attd. R.F.C.



Second Lieut. J. B. Hinchcliffe, King's Own Yorks. L.I., attd. R.F.C.

Capt. P. A. Kirkup, Durham L.I., attd. R.F.C.

Second Lieut. E. H. Lascelles, K.R.R.C., attd. R.F.C.

Second Lieut. E. V. Maclean, R.F.A., attd. R.F.C.

Second Lieut. W. S. Mansell, E. Surrey R., attd. R.F.C.

Second Lieut. C. G. Riley, R. Fus., attd. R.F.C.

Second Lieut. R. H. M. S. Saundby, R. Warwick R., and Royal Flying Corps.

Second Lieut. S. Stretton, Royal Flying Corps.

#### Previously reported Missing, now reported Wounded.

Capt. W. D. S. Sanday, Royal Flying Corps.

#### Missing.

Second Lieut. L. L. Clark, R.H.A., attd. R.F.C.

Lieut. K. Mathewson, Royal Flying Corps.

Second Lieut. H. J. Newton, Cheshire R., attd. R.F.C.

Second Lieut. R. W. Nichol, Royal Flying Corps.

Lieut. J. A. N. Ormsby, Canadian Machine Gun Batt., attd. R.F.C.

Second Lieut. C. A. Ridley, R. Fus., attd. R.F.C.

Capt. C. W. Snook, Royal Flying Corps.

Capt. W. A. Summers, Hussars, attd. R.F.C.

Second Lieut. C. I. S. Thomas, Royal Flying Corps.

Lieut. M. W. Thomas, R.F.A., attd. R.F.C.

Second Lieut. J. C. Turner, R.F.A., attd. R.F.C.

#### Previously reported Missing, now reported Prisoners of War.

Second Lieut. R. W. Nichol, Royal Flying Corps.

Second Lieut. L. A. Wingfield, R. Fus., attd. R.F.C.

#### Previously reported Missing, now Unofficially reported Prisoners of War.

Second Lieut. W. F. L. Castle, Royal Flying Corps.

Capt. T. W. P. L. Chaloner, Yorks. R., and Royal Flying Corps.

Lieut. H. Clements-Finnerty, Lancers, Attd. R.F.C.

Second Lieut. J. W. Toone, R. Irish R. and R.F.C.

Second Lieut. C. I. Van Nostrand, Royal Flying Corps.

#### Corrections:

#### Missing.

Second Lieut. R. M. W. Browne, R.F.C., should read:

Second Lieut. R. M. Wilson-Browne.

Second Lieut. A. H. T. L. Speer, R.F.A., attd. R.F.C., should read:

Lieut. A. H. T. L. Speer.



## THE "X" AIRCRAFT RAIDS.

THE following *communiqués* have been issued by the Field-Marshal Commanding-in-Chief Home Forces:—

#### "X 42" Raid, August 9th. "August 9th, 10.15 a.m.

"Hostile airships crossed the East Coast of England in the early hours of the morning. Another airship is reported to have visited the South-East Coast of Scotland.

"The raiders did not penetrate far inland, but dropped a number of bombs in various localities near the coast.

"At several places the airships were engaged by anti-aircraft guns and driven off from their objective.

"Reports received up to the present show that three women and one child were killed, and 14 persons injured.

"No damage of military importance has been reported."

"4.10 p.m.

"The Eastern Coast of the United Kingdom was raided by hostile airships this morning between 12.30 a.m. and 2.30 a.m.

"The East and North-East Coast districts were visited by the raiders at widely distant points, more or less simultaneously.

"The attack was carried out by the enemy by single ships or by pairs of ships. Independent observations of the raiders estimate their numbers variously at between seven and ten.

"None of the airships ventured more than a few miles inland, except in the extreme North. The attack seems to have been solely directed against the towns situated on the coast. Indiscriminate destruction of property seems to have been the main object of the raid.

"Anti-aircraft guns came into action at four places, and seem to have been successful in nearly every case in driving off the raiders. One raider was pursued several miles to sea by one naval aeroplane.

"In view of the action of the guns and the apparent uncertainty of the movement of the airships, it is not surprising that the enemy failed to attain his end. The bombs mostly fell wide of any centre of population.

"An exception must be made in the case of one North-Eastern town, where the following casualties have now been reported:—

	Men.	Women.	Children.
Killed .. .. .	—	2	3
Died of shock .. .. .	1	—	—
Injured .. .. .	4	5	3

"In another North-Eastern town one man, one woman and three boys were injured.

"The total damage amounts to four houses partly burnt; numerous windows broken in several different towns and villages; 50 ft. of railway torn up; one horse killed; some lesser insignificant damage. None of the damage is of the slightest military importance.

"About 100 high explosive and over sixty incendiary bombs have been traced. The enemy probably disposed of more bombs, as several were heard exploding on impact in the sea, and others fell on waste land. None of these have been included in the above figures."

"August 11th.

"Since the issue of the last *communiqué* of the 9th inst., regarding the hostile air raid of the preceding night, two of the injured have succumbed; the total number of deaths is, therefore, eight.

"Careful inquiries made in those districts from which detailed reports were not available on the 9th inst. have been made. These show that the total damage caused by the raid is slightly greater than at first stated.

"The total stands as follows:

"Four small houses wrecked.

"One shop demolished.

"Three dwelling houses and three shops damaged by explosion or fire.

"A number of small houses and cottages slightly damaged either by fragments of bombs or by concussion which shattered windows.

"Fifty feet of colliery railway line torn up.

"One horse killed.

"This is a complete list of all damage caused during this raid. None of it is of any military significance whatever."

#### German Version.

"Berlin, August 10th.

"Several German naval airship squadrons during the night of Aug. 8th-9th bombarded with explosive bombs of the heaviest calibre and incendiary bombs the naval bases on the English coast, and industrial establishments of military importance in the coastal counties from Northumberland to Norfolk. In the comparatively clear night excellent results could everywhere be clearly observed. Powerful explosions were observed at the iron works and benzol factories in Middlesbrough, and large fires were seen in the harbour establishments of Hull and Hartlepool. The good effects of the explosions were also observed in yards on the Tyne, and fires were caused in the industrial establishments of Whitby. Strong effects were seen at the railway establishments of King's Lynn. All our airships returned undamaged, in spite of the enemy's searchlights, anti-aircraft guns, and sea-fighting forces."

It is officially stated that this German report is the usual perversion of the truth.

#### "X 43" Raid, August 12th.

The following *communiqué* was issued by the Field-Marshal Commanding-in-Chief, Home Forces:—

"August 12th.

"Two hostile seaplanes appeared over Dover between 12.25 and 12.30 this afternoon. Four bombs were dropped, but no material damage was done beyond the breaking of a few windows.

"Anti-aircraft guns came into action and aeroplanes went up in pursuit of the raiders, who made off seawards at about 12.35.

"The casualties were one officer and six men slightly injured."

# The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

## New Club Premises.

**Alteration of Rule 50.**—At the Special General Meeting of the Members held on July 27th, 1916, it was unanimously resolved that Rule 50 be altered as follows:—

"**RULE 50.**—For the year 1917 and thereafter the subscription for Members shall be £5 5s. 0d. per annum, and for Lady Members £2 2s. 0d. per annum, or such other sum as may be decided upon in General Meeting, and the entrance fee £2 2s. 0d., or such other sum as the Committee may from time to time determine."

The Club will remove from its present premises at the end of September, and full particulars of the new Club House will be issued shortly.

## THE FLYING SERVICES FUND administered by THE ROYAL AERO CLUB.

The Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of

## THE LORD MAYOR ENTERTAINS SOME OF OUR WOUNDED.

WHAT might be described as a cerulean blue army overran the magnificent grounds of the Karsino at Hampton Court on Saturday last, when 1,000 wounded soldiers were the guests of the Lord Mayor, Sir Charles Wakefield, and were entertained to tea on the terraces. Despite the petrol difficulty, they were, owing to the kindly efforts of the A.A.V.S.C., the transport section of the Polytechnic V.T.C. and the L.G.O.C., with



Entertainment of Wounded Soldiers by the Lord Mayor, Col. Sir Charles Wakefield.—Mr. Harry Hawker, on a Sopwith biplane, giving an exhibition of flying, including looping, at the Karsino, Hampton Court, on Saturday last.

the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The Fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers, and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 166, Piccadilly, London, W.

## Subscriptions.

	£	s.	d.
Total subscriptions received to August 8th, 1916	10,807	0	10
Staff and Workers of Gwynnes, Ltd. (Twenty-first contribution)	8	7	9

Total, August 15th, 1916.. 10,815 8 7

166, Piccadilly, W. B. STEVENSON, Assistant Secretary.

the assistance of many private owners, transported to the scene of activities by motor vehicle.

On being ferried over to the island, each "Tommy" was presented with a packet of cigarettes, a box of matches, a programme, and a fine souvenir badge in coloured enamels and gold lettering, bearing the City coat of arms, and the wording:—"From the Lord Mayor, Col. Sir Charles Wakefield. Souvenir of August 12th, 1916." Ladies of the Wimbledon Swimming Club gave an exhibition of diving. There were coconut shies and "hoop-la," darts and pipe breaking, at the old village fair at the west end of the island.

During tea, Mr. Harry Hawker fulfilled his promise to fly over and give an exhibition of his skill on a Sopwith biplane. He arrived shortly before five, flying at a high altitude, and planing down to within a couple of hundred feet. Sheering off he again climbed to about two thousand, and returning gave a great display of vertical banking and looping the loop, finally disappearing in the direction of Brooklands. The cheers—real Wakefield cheers—could Hawker have heard them, were such as only "Tommy" can give.

"Fall in" was sounded shortly after six, and a motor ride home to their respective hospitals brought to a close a most enjoyable day. Sir Charles is to be sincerely congratulated on the success attending his efforts to make everyone feel absolutely at home, a faculty he has in abundance, coupled with pure-hearted goodwill.

A most enjoyable day was spent, and one not to be easily forgotten by those taking part in it.

## FLYING AT HENDON.

A DECIDEDLY gusty wind prevailed at Hendon last Saturday afternoon, gusts of 40 m.p.h. being quite frequent up above. In consequence, therefore, it was not until late in the afternoon, when conditions calmed down somewhat, that passenger work on the 80 h.p. G.-W. three-seater biplane was possible, although there were many applications for flights. Previous to the passenger work, however, a large Curtiss tractor came out and climbed to a fairish altitude where the strength of the wind was manifest by the behaviour of the machine. Marcus D. Manton, H. C. Biard, C. Pashley and J. S. B. Winter all took it in turns to take up the passengers on the G.-W. 'bus, and M. G. Smiles and W. T. Warren, jun., took several passengers on the new L. and P. tractor biplane, and also executed some loops. Shortly after 6 o'clock a sharp shower of rain gently but firmly put a stop to any further proceedings and drove the visitors home.

On Sunday it was as windy as ever, but in spite of this there was some good flying. This was practically a repetition of the previous day's proceedings, the G.-W. stud doing passenger work on the three-seater, and "Wee Willie Warren" looping and taking passengers on the L. and P. tractor.





#### Grahame-White School, Hendon.

EIGHTS with instructor last week: Messrs. Ballard, Donald, Drew, Goodheart, Jamie, Keymer, Mulville and Stevens. Circuits with instructor: Messrs. Cockell, Rodocanachi and Ward. Straights with instructor: Messrs. Alty, Duncan, Fisher, Hodgkinson, Lyles, Mills, Saunders, Shadwell, Soden, Zambournis and Ormerod. Mr. Cooper doing figures of eight alone. Certificates were taken by Messrs. Welinkar and Forster.

Brevet tests A and B by Mr. Phillips.

Instructors: Mr. C. Grahame-White, Messrs. Manton, Winter, Pashley, Biard and Hale.

#### Beatty School, Hendon.

THE following pupils were out during last week: Messrs. Skeet, Gliksten, Mitchell, Rudd, Curry, Gadsden, Earl, Garlick, McPherson, Towson, Elliott, Austen, Turner, J. Squires, Bruce, White, de Wilde, Wood, and Owen.

The instructors were: Messrs. G. W. Beatty, G. Virgilio, L. L. King, A. E. Mitchell and H. Fawcett, the machines in use being Beatty-Wright dual-control and single-seater propeller biplanes and Caudron dual-control and single-seater tractor biplanes.

Certificates were taken during the week by Messrs. C. W. Skeet (on Caudron machine), G. McPherson and H. J. H. Garlick (on Beatty-Wright machine).

#### Hall School, Hendon.

PUPILS out last week:—With J. Laurence Hall: Messrs. J. Russell, Graham Davies, and Probationary Flight Sub-Lieut. Malden. With Cecil M. Hill: Messrs. Cordner, Orton, Cownie, Gudger, Rayne, Le Grice, and Lieut. Packman. With Fred J. Glegg: Messrs. Henley, Stampes, Mayer, Barton, Illingworth, Smith, and Lieut. Packman. With Stanley G. Cownie: Pupils rolling—Messrs. Course, Mayer, Yuill, Maude, Stampes, and Lieut. Packman.

Royal Aero Club Certificates taken by J. Russell, Graham Davies, S. G. Cownie, Le Grice Test A. Hall (Government type) tractors in use.

#### London and Provincial School, Hendon.

PUPIL rolling last week: Mr. Davy. Doing straights: Messrs. Quayle, Mander, Lewis, Rogers, Randell, Dunnott, Birkin, Fox and Sellars. Circuits and eights: Monsieur J. Leman.

Instructors: Messrs. W. T. Warren, M. G. Smiles and W. T. Warren, Jun.

Three tractor biplanes in use.

#### Ruffy-Baumann School, Hendon.

SCHOOL out nearly every day last week. Pupils with instructors on 60 and 50: West (48 mins.), Hayes (36), Babington Smith (18), Trubridge (20), Carr (32), Holmes (44), and Fanshawe (1 hour 10 mins.). Pupils flying alone: West and Holmes.

Instructors: E. Baumann, F. Ruffy, A. Baumann, and A. Thomsen.

60 and 50 h.p. Ruffy-Baumann dual-control biplanes in use.

#### Bournemouth School.

PUPILS rolling alone last week: Messrs. Davies, Constant, Lloyd Owen, Holland, Wilmott, Montgomery, Ross, and Wingfield.

Doing straights alone: Messrs. Brandon, Hammersley, Pritt, J. B. Smith, Fenn, Hinchliff, and Adamson. Doing half-circuits alone: Messrs. O. Wilson, J. Wilson, Daniel, and H. Smith. Mr. W. G. Little figures of eights and circuits alone.

Two 35's, 45, 60 h.p. Caudrons in use.

Instructors: Messrs. S. Summerfield and E. Brynildsen.



#### An R.N.A.S. Officer's Bravery.

THE *London Gazette* of August 11th contained an announcement by the Admiralty that the King has been pleased to confer the decoration of the Albert Medal of the First Class on Lieut. Frederick Joseph Rutland, R.N. (Flight-Lieutenant, R.N.A.S.):—

"The following is the account given by the Admiralty of the services in respect of which the decoration has been conferred:

During the transhipment of the crew of His Majesty's ship "Warrior" to His Majesty's ship "Engadine" on the morning of June 1st, 1916, succeeding the naval battle off the coast of Jutland, one of the severely wounded, owing to the violent motion of the two ships, was accidentally dropped overboard from a stretcher and fell between the ships. As the ships were working most dangerously, the Commanding Officer of the "Warrior" had to forbid two of his officers from jumping overboard to the rescue of the wounded man, as he considered that it would mean their almost certain death. Before he could be observed, however, Lieut. Rutland, of His Majesty's ship "Engadine," went overboard from the forepart of that ship with a bowline and worked himself aft. He succeeded in putting the bowline around the wounded man and in getting him hauled on board, but it was then found that the man was dead, having been crushed between the two ships. Lieut. Rutland's escape from a similar fate was miraculous. His bravery is reported to have been magnificent."

#### Medals for the R.F.C.

In the long list, published on August 12th, of names of non-commissioned officers and men, to whom His Majesty the King has been graciously pleased to award the Military

Medal for bravery in the field, appear the following:—

7959 Corpl. F. J. Jenkins, R.F.C.

6326 1st Class Air-Mechanic J. I. T. Jones, R.F.C.

8483 2nd Class Air-Mechanic F. A. V. Pattenden, R.F.C.

#### Wireless Telegraphists for the R.F.C.

THERE are still vacancies in the Royal Flying Corps for wireless operators. Applicants, who should be of good education, age from 19 to 22, can get full particulars as to training, &c., any morning at the Polytechnic, Regent Street, W.

#### Fatal Accidents.

Two lives were lost in an accident on August 10th. A machine piloted by Lieut. G. S. Rogers was flying at a height of 1,500 ft., when another machine hit and damaged the tail. Lieut. Rogers endeavoured to control his machine, but nose-dived to the ground. The pilot was instantly killed, and the passenger, Second Lieut. De Frece, died shortly after being picked up. The second machine made a safe descent.

A machine piloted by Sec. Lieut. Ivan Carryer, E. York Regt. and R.F.C., caught fire while flying on August 13th. In coming down the machine crashed into a building, and the pilot died three hours after admission to hospital.

#### New Recruits for the S.B.A.C.

THE following firms have recently been elected to membership of the Society of British Aircraft Constructors, Ltd. The previous lists of members were given in our issues of April 20th and June 8th last:—

**Ordinary Members**—Aster Engineering Co., Ltd., Gnome and Le Rhone Engine Co., Green Engine Co., Ltd., Eastbourne Aviation Co., Ltd., Gordon, Watney and Co., Ltd.

**Associate Members**—Aircraft Supplies Co., Ltd., Bowden Wire, Ltd., British Aeroplane and Varnish Co., Ltd., Venesta, Ltd.

## R.F.C. INQUIRY COMMITTEE. INTERIM REPORT.

AN interim report of the R.F.C. Inquiry Committee was issued on Tuesday night as a White Paper. We reproduce this in full below:—

The Committee appointed "to inquire into the administration and command of the Royal Flying Corps with particular reference to the charges made both in Parliament and elsewhere against the officials and officers responsible for that administration and command and to make any recommendations in relation thereto" make this interim report. In so doing, the Committee, apart from one general observation at the end of the report, deal only with the charge of criminal negligence made by Mr. Pemberton Billing against the administration and higher command. The Committee take this course because their final report must be delayed owing to the mass of evidence they have had before them, evidence given for the most part in a spirit of informed and genuine criticism pointing out alleged shortcomings and suggesting means for their future avoidance.

Mr. Pemberton Billing's charge of criminal negligence is one which readily separates itself from the criticisms referred to, depending as it does upon specific instances selected by Mr. Pemberton Billing in proof of his accusation. The charge, moreover, was made in Parliament. It caused a considerable amount of uneasiness, and as all the cases have been investigated into which Mr. Pemberton Billing desired the Committee to inquire, it seems advisable to present an interim report upon the charge so made without loss of time.

In order to make the report self-contained and the more easily intelligible, the precise words in which the charge of criminal negligence was made are here set out.

Speaking in the House of Commons on March 22nd last, Mr. Pemberton Billing is reported to have said of men of the Royal Flying Corps who had met their deaths in flying: "I do not want to touch a dramatic note this afternoon, but if I did I would suggest that quite a number of our gallant officers in the Royal Flying Corps have been rather murdered than killed." (See Official Report, Vol. 81, col. 244.) The Official Report is hereafter referred to under the more familiar title of Hansard.

Speaking again in the House on March 28th, Mr. Pemberton Billing is reported (Hansard, Vol. 81, col. 615) to have used these words: "I would like to suggest that it is extremely difficult, even in law, to draw a hard and fast line between murder and manslaughter or between manslaughter and an accident caused by criminal negligence. When this negligence is caused by the official folly of those in high places, coupled with entire ignorance of the technics (*sic*) which in this case can alone preserve human life, official folly becomes at any rate criminal negligence. When the death of a man ensues, the line between such official folly and murder is purely a matter for a man's conscience."

This extract is set out at length in order to make it clear that the charge of criminal negligence is levied against the administration and higher command of the Royal Flying Corps and not against the subordinate officers or pilots. When, therefore, in this report the question of negligence is considered and discussed, it must be understood that the Committee have in mind this question: Does the particular instance under consideration show negligence on the part of the higher command or the persons responsible for the administration of the service?

In support of his allegation of criminal negligence Mr. Pemberton Billing gave to the House on the same March 28th a number of specific instances. (See Hansard, Vol. 81, col. 611, *et seq.*) When Mr. Pemberton Billing appeared before the Committee he was invited to give the instances into which he desired inquiry to be made, and to give the evidence upon which he relied. He informed the Committee that many of the cases mentioned by him in the House had occurred in the naval service, but he selected for investigation a number of cases in the Royal Flying Corps.

The Committee have inquired into every one of the cases so selected and deal with them *seriatim* in this report. This report sets out in every case the statement as it appears in Hansard, where the case is there mentioned. Then a summary of any further information given to the Committee by Mr. Pemberton Billing. Then the facts as found by the Committee, and, lastly, their conclusion. Where a case is numbered the number is that given by Mr. Pemberton Billing in his speech in the House.

It is only necessary to add that in no case has any direct evidence been given in support of any allegation of negligence. Mr. Pemberton Billing informed the Committee that the source of his information was the talk of the messroom or statements written or oral made to him by persons whose names he was not at liberty to disclose. The Committee appreciated the difficulty experienced by him and others in getting officers of the Royal Flying Corps to come forward publicly, and, in order to meet this objection, made arrangements to take their evidence in the absence of General Henderson and any of his staff, and in such a way as to prevent disclosure of their identity. These arrangements were communicated to Mr. Pemberton Billing, and it is to be regretted that, while certain officers availed themselves of the opportunity, none of Mr. Pemberton Billing's informants did so. Under these circumstances the Committee have followed up such information as Mr. Pemberton Billing could give them by their own enquiries and have obtained the best evidence available.

To proceed to the instances—(a) No. 2, Hansard. Vol. 81, col. 611. Side-slip, nose-dive; bombs blew up everyone on board machine. Similar to that which killed two pilots previously. Liable to uncontrollable spirals.

*Supplemental statement to the Committee.*—Type of machine, B.E. 2/8. Date, 16 August, 1914. Place, Minster. Persons killed—Lieutenant E. W. C. Perry; air mechanic, Parfitt.

*Facts.*—Mr. Perry flew over to Amiens on a B.E. 8 machine with the First Expeditionary Force. He with others landed at Amiens. He was one of the last to leave Amiens and was seen to start by Captain Cholmondeley, who has since been killed. Mr. Perry, on leaving Amiens, appears to have stalled his machine, *i.e.*, to have attempted to climb too fast, with the result that the machine lost speed, turned on its side, fell to the ground, caught fire, and Mr. Perry was killed. Mr. Perry was pleased with the performance of his machine on the flight to France, and spoke of it as the pick of the bunch. The aerodrome at Amiens is particularly large. Mr. Perry was an experienced pilot. The type of machine has been abandoned. It was not successful and was somewhat under-engineed, and was apt to lose speed quickly in the air. It was abandoned because it was not fast, and not sufficiently better than other machines then in use to justify its continuance at the Front. It is still used for training.

*Conclusion.*—There was no negligence in giving this type of machine to an experienced pilot, as Mr. Perry was; although, with the 80 h.p. Gnome engine with which it was then fitted it required careful handling, especially in climbing, to prevent its losing its flying speed.

In considering whether the use of a particular type of machine was or was not negligent, it is necessary to bear in mind the enormous progress that has been made during the war in the development of aeroplanes and engines by ourselves and by other nations engaged in the war, although probably even yet no absolutely reliable type has been evolved. The question of negligence in the use of a particular type of machine must always be determined with reference to the types of machines and engines available at the date when a given accident occurred. It might be quite proper to use in the early stages of the war an aeroplane whose use to-day would be wholly wrong.

(b) No. 11. Hansard.—Machine caught fire in air with experimental Royal Aircraft Factory engine. Bombs on board burst; pilot burnt to death in air.

*Supplemental statement.*—Date November 5th, 1914. Place, Farnborough. Person killed, E. T. Busk. Type of machine, B.E. 2. Killed while doing experimental work for the Air Service.

*Facts.*—Mr. E. T. Busk was conducting experimental work in the air. He was an experienced and intrepid flier, and had the rare faculty of being able to note and report upon the effect in actual flight in the air of experiments in construction and design. His work was highly dangerous, and he was killed while performing it. His death was described by General Henderson as one of the greatest losses to aeronautics we have ever suffered. The Committee desire to endorse the statement.

*Conclusion.*—There is no evidence of negligence in the death of Mr. Busk, whose loss was due to the exceptionally dangerous nature of the work to which he devoted himself.



(c) No. 14. Hansard.—Lost at sea flying on leave. "It is a very pernicious habit in France, that where there is an old machine which they want to get back and which is no use for any further service and a pilot is going home on leave, if he likes to go home in it he can do so. It is a dangerous habit to endanger a valuable pilot's life to get an old creak of an aeroplane back to England and thus save transport."

*Supplemental statement.*—Date, December 30th, 1914. Machine, Bleriot monoplane. Lost in Channel. Pilot, Captain Picton Warlow.

*Facts.*—The machine was a two-seater Bleriot monoplane, a type that was in process of being discarded as too slow in climbing with full military load. As these machines could be spared from service at the Front such of them as were serviceable as school machines were sent home. Officers on leave were allowed as a privilege to fly them. This machine was overhauled before starting, and Captain Warlow tested it by a short trial flight. The weather was clear, but there were some high banks of clouds, and it is supposed that Captain Warlow got into the cloud banks and lost his way, exhausted his supply of petrol, and came down into the sea. He was supplied with petrol sufficient for twice the distance of his intended flight.

*Conclusion.*—The very serious suggestion that Captain Warlow was allowed to risk his life on an "old creak of an aeroplane" to save transport is entirely unfounded. How the accident happened can only be surmised, but the machine was, as far as could be ascertained, in good order, and there was no negligence in allowing Captain Warlow to fly in it.

(d) No. 15 by Mr. Pemberton Billing, but not in Hansard.

*Statement.*—Date, December 30th, 1914. Pilot, Captain W. Lawrence. Place, France. Machine said to be obsolete; wings folded up in the air. Mr. Pemberton Billing says he obtained the information from an officer who saw the accident.

*Facts.*—The machine was a Blériot—a type now superseded for the reasons given in the last case. Captain Lawrence, an experienced pilot, was about to take part in a bombing expedition against a difficult target. Captain Lawrence was of opinion that the best way to achieve his object was to approach the target, which was well protected by anti-aircraft guns, at a great height, to dive down to within 200 or 300 ft. of his objective, then to flatten out, drop his bombs, and climb again. He decided to test this theory behind our own lines. He climbed to between 5,000 and 6,000 ft., then dived straight down with his engine full on for something like 3,000 ft., when his machine broke up, whether in the act of trying to flatten out or not cannot be definitely ascertained.

*Conclusion.*—The Blériot type has been discarded, not because of weakness, but in due course of evolution in favour of better machines. Captain Lawrence, by this manoeuvre, subjected the machine to an unbearable strain in all probability in flattening out. There is no evidence of undue weakness or defect in the machine or of any other negligence.

(e) No. 19. Hansard. Bombs blew up when landing. Killed.

*Supplemental statement.*—Date, January 21st, 1915. Place, Dunkirk. Pilot, Captain Roche. Suggestion, improper design of bomb or faulty attachment to the aeroplane.

*Facts.*—Captain Roche's machine and his body were found in the sea off Dunkirk. Bomb explosion was heard. No one saw the accident, and it is impossible to state exactly what happened.

*Conclusion.*—The probabilities are that Captain Roche was obliged to descend owing to engine failure, and either that finding himself near the ground he dropped his bombs so as not to have them in the machine on landing, or the bombs exploded on landing. Against this latter theory are the facts that the aeroplane apparently landed in the sea and that Captain Roche's body was uninjured by bombs. If the former theory, which seems most likely, is right, there is nothing in the suggestion of improper design of bomb or faulty attachment. If the latter theory is right, the fact is that the safest method of attachment of bombs to aeroplanes was not then and probably is not yet known. Continual experiments and improvements are being made, but even now it is not always possible to prevent bombs exploding when a forced and violent landing is made. Bombs themselves were much more faulty in construction and liable to explode in January, 1915, than now, when many improvements in the direction of increased safety have been carried out. There is no evidence at all of the neglect of any known precautions, and, moreover, the

bombs do not appear to have been the cause of death. The Committee would refer their observations on case (a) as to the necessity of bearing carefully in mind the date of any given accident. As in the case of aeroplanes and engines so with bombs, continual improvements are being made both in the manufacture of bombs and in their method of attachment.

(f) No. 24. Hansard.—Spiral dive 300 feet over the sea. Killed.

*Supplemental statement.*—There is a mistake in Hansard. It should read "B.E." instead of "over the sea." Date, February 25th, 1915. Place, Central Flying School, Upavon. Pilot, Lieutenant T. Dawson Downing.

Suggestion by Mr. Pemberton Billing that the machine was a B.E. 2 C., an inherently stable machine, which he describes as apt to take nose dives and unable to right itself in under 500 feet. That pilots take liberties with it on account of its inherent stability, and that this accident may have been due to over-confidence in the machine engendered by its stability.

*Facts.*—The machine in question was not a B.E. 2 C., but a B.E. 2 B., which is not an inherently stable machine. The engine was a 70-h.p. Renault.

*Conclusion.*—Mr. Pemberton Billing's suggestion fails because he is mistaken as to type of machine. It was supposed at the time that Lieutenant Downing became incapacitated while in the air, perhaps from a fainting fit. This may have been so, but it is only surmise. Nothing can be alleged against the machine, which was examined and in good order before starting.

(g) 30. Hansard.—Shot down, flying low, in bad weather. Died of injuries. Ordered out on bomb raid in the dark and rain.

*Supplemental statement.*—Date, 29th March, 1915. Place, Lille. Pilot, Lieutenant St. J. Warrand. Machine, B.E. Number unknown, suspected to be a B.E. 2 C. If so, machine too slow.

*Facts.*—The machine was a B.E. 2 C. Captain Warrand with two other officers started on a special bombing expedition before daylight. As day broke it became foggy. Captain Warrand and one officer went on and reached their objective. The third lost his way. In order to do their work it was necessary to descend very low over a well-defended place. Both officers were brought down. Captain Warrand had his leg broken by anti-aircraft fire.

*Conclusion.*—There is here no trace of negligence. It was an occurrence such as is inevitable in war, and of which no doubt many instances could be given.

(h) No. 34. Hansard.—Killed in a side-slip. Typical of this type of machine.

*Supplemental statement.*—Date, 26th April, 1915. Place, France. Pilot, Second Lieutenant W. Polehampton. Machine, B.E. 2 C. Accident occurred in getting off the ground. This machine is apt to take a side-slip if not up to its flying speed when it leaves the ground. The negligence was the use of this type of machine. There is special danger in the first 500 feet of the ascent and the last 500 feet of the descent with this machine.

*Facts.*—The accident happened at St. Omer.

*Conclusion.*—This was a regrettable accident such as happens from time to time. It would probably not have been brought forward but for the fact that it happened on a B.E. 2 C. machine. Mr. Pemberton Billing has criticised this machine severely, and, as the Committee understand him, goes the length of saying that to allow the use of a B.E. 2 C. machine for any purpose except that of flying in peace times, and then only by an experienced pilot, is negligence. The Committee entirely dissent from this view, and consider that, though somewhat slow, a B.E. 2 C. has always been relatively to other machines a safe machine to fly. There was no negligence in supplying Lieutenant Polehampton with a B.E. 2 C. machine.

(i) No. 43. Hansard.—Killed. Reported death was caused by bombs exploding in the air.

*Supplementary statement.*—Date, May 23rd, 1915. Place, France. Persons killed, Lieutenants Bewes and Hyland. No other information. Suggestion, careless handling of bombs and no proper bomb rack.

*Facts.*—These two officers were flying behind our lines and preparing to cross the enemy's trenches when a hand grenade they had with them exploded. Efficient racks were provided for the carriage of these grenades, but they require to be detached from the racks, and a safety device has to be removed before throwing. From the nature of the case nothing can be definitely ascertained, but it is presumed that the observer

was getting the grenades ready for use and by accident dropped one of them upon the floor of the aeroplane, causing it to explode.

**Conclusion.**—It is impossible to find or even plausibly suggest any negligence in this case.

(l) No. 70. Hansard.—Killed in action while testing a type of machine condemned by the French six months ago.

**Supplementary statement.**—Date, August 24th, 1915. Type of machine, French Morane monoplane. Officer, Captain Mapplebeck. Place, Joyce Green. Not in action, as stated in Hansard. Safety belt of pilot fastened to three-ply wood with wooden screws, and pilot found to have fallen forward.

**Facts.**—The monoplane was fitted with an 80-h.p. Gnome engine. Captain Mapplebeck was ascending. He executed, when about 80 ft. from the ground, a sharp, heavily-banked right-hand turn. The machine spun round on its own axis and then nose-dived vertically. There was very little wind. The accident appears to have been due to the machine "spinning" on a heavily-banked turn, the pilot not having sufficient speed and height to regain control before hitting the earth. It is the fact that the French have largely, but not entirely, discarded this type of machine, as also have we. Both they and we continued to use a few as single seaters. It was a good machine in the hands of an expert flier, as Captain Mapplebeck was. It was, in fact, the type of machine on which the famous French airman, Garros, did such good work before he was brought down.

**Conclusion.**—The accident was due to an unfortunate error of judgment on the pilot's part. There is no evidence as to the alleged faulty attachment of the belt. Nor in the opinion of the Committee did such faulty attachment, assuming it existed in any way, contribute to the accident. It may be mentioned in passing that many pilots prefer not to use a safety belt. This type of machine was not one fit to be used by an inexperienced flier, and had Captain Mapplebeck not been a pilot of experience the Committee would have considered it negligence to allow him to fly it. In view of Captain Mapplebeck's skill and experience the Committee do not think there was any negligence in supplying him with this machine.

(m.) No. 80. Hansard. Machine caught fire on landing. Pilot died.

**Supplemental statement.**—Date, September 24th, 1915. Machine, S.E. 4. Place, Hounslow. Pilot, Captain Blood. No suggestion of negligence made in this case, but a case for inquiry.

**Facts.**—Captain Blood appears to have made the same mistake as Captain Mapplebeck (case l.), and to have turned his machine at a low speed, thus causing a spin, and having insufficient height above the ground in which to regain control.

**Conclusion.**—No evidence of negligence.

(n.) No. 99. Hansard.—Killed, passenger. Engine failure. Side-slip and dive.

**Supplemental statement.**—Date, December 10th, 1915. Passenger, Lieutenant Croft. Engine failure. Side-slip with nose-dive. Type of machine not known. Sounds awfully like a B.E. 2 C. That is the peculiarity of the B.E. 2 C.—engine failure, side-slip, failure to recover.

**Facts.**—The pilot was Lieutenant Macdonnell. The place, Castle Bromwich. The machine was an Avro and not a B.E. 2 C. The pilot was banking his machine at a normal angle to make a turn at a comparatively low altitude (estimated at about 250 feet) when a gust of wind caught the machine causing it to bank very suddenly at an abnormal angle. The pilot endeavoured to right the machine and in so doing put its nose down. This caused a nose dive with a slight spin, and the machine fell heavily. The weather was "bumpy," but Lieutenant Macdonnell had been up three times before that morning and said it was not too bad to fly.

**Conclusion.**—The only negligence suggested was that the machine was probably a B.E. 2 C. This is a mistake; the machine was an Avro, a machine which Mr. Pemberton Billing several times cited as being safer than a B.E. 2 C. Had he known that the machine was an Avro he would probably not have thought it worth while to refer to this incident.

(o.) Not in Hansard.—Major Unwin's case.

**Statement by Mr. Pemberton Billing.**—Major Unwin died on March 20th, 1916, from injuries received on January 31st, 1916. Place, Joyce Green. Major Unwin was telephoned by the War Office, or by his Wing Commander, to send up two pilots on the night of January 31st, when a Zeppelin raid over London was anticipated. He replied, "We have no suitable

machine here. The ground is not suitably lighted. There is a thick ground fog and it is not safe for anybody." Major Unwin had never previously flown at night. He said, "I will not disobey orders; I will go up myself." His machine, a B.E. 2 C., caught a tree in descending and was burnt, Major Unwin receiving the injuries to which he afterwards succumbed.

**Facts.**—News had been received of a Zeppelin raid on the north-east coast, and it was thought (erroneously as it turned out) that a Zeppelin was making for London. Orders were sent to Major Unwin at Joyce Green giving him the information, and telling him to send up aeroplanes "if the weather conditions were suitable." There was a ground mist, although not dense at that particular place. Major Unwin, who was an experienced night flier, decided to go up himself. In descending he came down too low before reaching the landing ground, probably due to the fact that he was new to Joyce Green, and dashed into some trees, with the result that his machine was burnt and he received the injuries from which he died. The ground itself is not a bad one to land upon and was well lighted. There was no engine failure. There is always danger in landing at night owing to the fact that while a pilot can see the guiding flares he is often unable to see obstacles like trees or hedges between himself and the ground as he gets low down for the purpose of landing. This danger is increased when there is a fog or ground mist. It is entirely untrue that Major Unwin had imperative orders to send up machines. Such orders are never given. The orders are always subject to the weather conditions, of which the officer in charge of the aerodrome is left to judge for himself. The Committee can discover no foundation at all for the unsupported suggestion of Major Unwin's alleged protest.

(p.) Closely connected with the last case is that of Major Penn Gaskell. This was not an instance brought forward directly by Mr. Pemberton Billing, but was referred to in a letter read by him to the Committee. The unknown writer of the letter says:—"Major Penn Gaskell, Squadron Commander at Ruislip, received an order to send an airman up as they expected a Zeppelin visit. He telephoned back that it was foggy and that it would be suicidal for anyone to go up. The War Office replied insisting on someone going up. Major Penn Gaskell said he would go up himself and that he knew he was going to his death, and like a true hero went up. It was so dark that he ran into a tree. His petrol tank burst and he was burnt to death, but he lived long enough to say he never expected to come down alive. He was a skilled man lately returned from the Front, and was beloved by all."

The facts are: The date was January 31st, 1916. The place was Northolt. The machine was a B.E. 2 C. The weather conditions were the same as in Major Unwin's case, i.e., a low mist. The orders were to go up if the weather permitted. It was the turn of Captain Sampson to go up, but Major Penn Gaskell told him not to go, and that he (the Major) would have a "chucker" round. He, too, like Major Unwin, caught a tree in descending. The tree was some three-quarters of a mile away from the landing ground. The machine caught fire. The glow could be seen from the landing ground. Major Penn Gaskell was extricated, but afterwards died. He was a most experienced night flier. The landing ground was properly lighted. Major Penn Gaskell made no protest. He did not refer to the danger of going up and say that he was going to his death. He said he would have a "chucker" round to see if it was any use sending airmen up. The Northolt ground is large with a good surface, and safe.

The cases of Major Penn Gaskell and Major Unwin call for special mention. Both accidents happened on the night of January 31st last. A Zeppelin raid was anticipated over London. The night was foggy. Orders were issued to the aerodrome at Northolt and Joyce Green that aeroplanes were to go up "if the weather conditions were favourable." It was not the duty of either of those gentlemen to go up himself. The conditions were unfavourable. No one could have blamed them if they had reported that it was impossible to fly. They determined that machines should go up, but as the risks were great each of them went up himself rather than send up a pilot as in normal circumstances he would have done. In each case this self-sacrificing devotion cost the officer his life.

Both these officers were expert fliers. Both had had experience of night flying. The Committee are grateful for having this opportunity of placing these facts on record as a tribute to their memory. It is outside the province of the Committee to do more than refer to the no less gallant conduct



of the men who, immediately on hearing of the accidents to these two officers, went up to take their places.

(g.) No. 205.—Not in Hansard.

**Statement by Mr. Pemberton Billing.**—Desmond Arthur was killed on some type of B.E. machine which had been repaired by the Royal Aircraft Factory. The repaired part broke at 4,000 ft. up and the pilot was pitched out.

**Suggestion.**—Faulty design or bad repair.

**Facts.**—The date was May 28th, 1913. The place, Montrose. There was a suggestion made at the time that there had been a patch on the outside of the right wing of the plane, and that someone had broken the tip of the wing, then repaired it, and put a patch over the repaired part, the suggestion being that this was done by someone with a view to hiding some damage which he had done to the machine. The matter was closely inquired into at the time by a Committee of which Mr. H. T. Baker, M.P., was Chairman. The Committee have had the notes of the whole of the evidence given to that Committee before them. There were some 23 witnesses. The suggestion depends on the unsupported evidence of one man out of these 23 witnesses. No useful purpose would be served in re-opening the matter, especially as some of the witnesses called have since been killed. A perusal of the transcript of the notes of evidence leads to the conclusion that the suggestion of the patch is quite unfounded.

To sum up, flying even at home is at present attended with considerable danger. It is imperative that every precaution

should be taken to reduce that danger to a minimum. No one could complain if Mr. Pemberton Billing had asked that these cases should be inquired into to ascertain whether the deaths of the men might have been prevented, but to base upon these accidents charges of criminal negligence or murder is an abuse of language and entirely unjustifiable.

The Committee think it right to say that Mr. Pemberton Billing made other criticisms and suggestions of a totally different character. Some of these deserve and will receive careful consideration.

There is one general observation the Committee desire to add to this interim report. There has been an enormous expansion of the Flying Service since the war, and all the critics of the Service without exception have borne testimony to the great progress made in its efficiency—a progress which, although most noticeable since the beginning of this year, is in the opinion of the Committee the result of many months of strenuous work. To this efficiency the recent reports from the front bear eloquent witness.

The members of the Committee are: The Hon. Mr. Justice Bailhache (*Chairman*); General Sir H. L. Smith-Dorrien, G.C.B., G.C.M.G., D.S.O.; The Hon. Sir Charles Parsons, K.C.B., F.R.S.; Messrs. J. H. Balfour Browne, K.C.; J. G. Butcher, K.C., M.P.; Edward Shortt, K.C., M.P.; Charles Bright, F.R.S.E., with Mr. D. Cotes-Freedy, M.A., LL.M., as *Secretary*.

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# AVIATION IN PARLIAMENT.

### Air Board Policy.

MR. BROOKES, on August 9th, asked the Prime Minister whether before the holidays he will be in a position to make any statement on the policy of the Air Board?

Major Baird (representing the Air Board): My noble friend proposes, during the recess, to make a report to the War Committee. Until that report is in the hands of the Prime Minister, he will not be in a position to make any statement on the subject.

### Anti-Aircraft Defences.

MR. BROOKES asked the Secretary of State for War whether he is now satisfied that he has at his disposal all necessary means for dealing with the Zeppelin attacks; and, if not, whether he is taking adequate measures to obtain them?

Major Baird: I regret that I cannot add anything to the written answer which I gave on 31st July to my hon. friend, wherein I stated that the development of air defences of the country has made great progress, and is proceeding as rapidly as the manufacturing output and the needs of our forces abroad permit.

Mr. Billing: Will the hon. gentleman say whether that still holds good after last night's raid; whether women and children were killed last night; and whether that is likely to recur under the existing organisation of the defences?

Major Baird: It still holds good, and all the more! The hon. member must know that these unfortunate things cannot be avoided in time of war. We are greatly improving the defences, and I think the Germans are more aware of it than anybody else.

Mr. T. Ferens asked on August 10th if it is a fact that in one important city on the East Coast in which lives were lost early on the previous morning through an air raid that there was only one gun and one poor searchlight used; and will he take means to ensure that adequate defences against air raids are provided and brought into action when necessity arises?

Major Baird (representing the Air Board): The Zeppelin which crossed a portion of the town referred to was fired at during the whole of the time that it was within effective range of the anti-aircraft defences. It passed high over the town and at great speed. The searchlight used was of a recent and powerful type. The anti-aircraft defences of the locality have been strengthened during the last month, and further improvements are being made in accordance with the general scheme of anti-aircraft defence, which is being carried out as rapidly as circumstances permit.

Sir J. Walton: Is the hon. and gallant gentleman aware that the searchlight failed at another point on the coast?

Major Baird: I shall be very glad to have any matter

connected with searchlights investigated if the hon. Baronet will be kind enough to give me details.

Mr. Pringle: In view of the number of raids which have taken place in this town, could the Department not have done better in the matter of the provision of guns by this time?

Major Baird: I do not think so.

### Removal of Anti-Aircraft Guns, &c.

SIR A. GELDER, on August 14th, asked the Secretary for War why the protection by anti-aircraft guns had been taken away from a certain city on the East Coast after having been used so effectively to repel attacks by Zeppelins for several months past; whether the removal of such guns had resulted in a serious loss of life and property on August 9th; and whether the military authorities were taking proper steps to immediately replace the guns removed by others of at least equal capacity and number, together with suitable searchlights, for the due protection of the city so that at least it might be guarded as fully as in the past.

Major Baird: The suggestions contained in this question are based on an entire misapprehension of the facts in regard to the defence of the particular town which I presume my hon. friend has in mind. It would not be in the public interest to make any detailed statement on the matter. No guns have been removed except on replacement by guns of greater efficiency. The searchlights available in this town are of the approved pattern, and are effective under normal conditions. But their efficiency is inevitably diminished should there happen to be fog and mist.

Sir A. Gelder: Is the hon. and gallant gentleman aware that the statement made on Thursday last in reply to an hon. member and the statement made to-day are quite contrary to the testimony of thousands of people who witnessed the raid?

Major Baird: I am aware that there have been statements made of that kind, but I have given the hon. gentleman the facts, and he cannot get over the facts. The facts are as stated.

Mr. Churchill: Is the Air Board responsible for these arrangements?

Major Baird: No.

Mr. R. Harcourt: May I ask whether questions on this subject are now addressed to the Air Board, and not to the War Office?

Major Baird: I am asked to answer these questions by my right hon. friend the Secretary of State for War.

Mr. Billing: Does the hon. and gallant gentleman definitely state that no guns whatsoever were removed from this particular town between the last raid and the one previous to it?

Major Baird: No, Sir, I said nothing of the kind. I said what is the truth, that when guns have been removed they have been replaced by better ones.

## AIRISMS FROM THE FOUR WINDS.

A RE-SHUFFLING of the members and constitution of the Parliamentary Air Committee was accomplished last week. At the first meeting on Wednesday a large number of members of both Houses attended at the House of Commons and an executive committee was constituted as follows:—Mr. Wilfrid Ashley (Chairman), Lord Montagu, Lord Strachie, Lord Peel, Sir Charles Nicholson, Mr. Basil Peto, Mr. Shirley Benn, Sir E. Cornwall, Major the Hon. A. C. Murray, Mr. Joynson-Hicks, and Mr. H. A. Watt, with Capt. Alan Burgoyne as hon. secretary.

One idea in the minds of the promoters is the bringing about a co-ordination of the air services, the ways and means of which are this week being gone into, as well as a determination as to the general policy to be adopted.

By way of a first dive into affairs Aviatric, a contingent of the Committee has availed itself this week of an invitation from the authorities to visit Farnborough. An ounce of practice is worth a ton of theory—sometimes.

THE lighter-than-air side of aircraft is also in the programme.

MATTERS Hendon way should be improved if the possibilities of access were more acceptable than at present. This has now become something more than a public convenience—it is a commercial necessity.

THE solution rests with the railway company concerned and we have hopes that they will rise to the occasion.

AVIATOR (*perhaps*) home from the war on leave: "And then when you are up pretty high—three or four miles, say—and you look down it's positively sickening. It is stupendous, awful. A great height is a fearful thing. I can tell you."

Intense female audience (*feelingly*): "Yes, I can sympathise with you, poor boy. I feel just that way myself when I'm on top of a step-ladder."

WILL the Mothers be conveyed to Hanworth Park by aeroplane next Mothers' Day?

A CORRESPONDENT asks "Why not inaugurate a 'Mothers-in-law's Day,' and take them up in an aeroplane (not strapped in) and loop-the-loop?"

"FLYING at Hanworth."

THE Whitehead 200-acre Aerodrome is the next development.

MR. J. A. WHITEHEAD is *some* hustler.

WITH H. Sykes to test and stunt for the new 'drome, it looks like another get-going-quick Whitehead success.

HOWEVER, "Wait and See."

QUARTERLY air-raid insurance policies are *not* likely to come into operation. There are evidently some over-optimistic would-be insurers around, for agitation to be worth elaboration in this direction. Better to stop talking and insure right away.

AIR-RAID insurance as a National asset is an accomplished fact. Best now to leave it at that, when it comes to splitting premiums into quarterly payments. The present workers for making the liability a national one should have awakened in September 1914, and joined "FLIGHT" in its campaign then.

BUT it probably was no concern of theirs *then*. It only affected somebody else, poor fellows. What an unselfish creature man is to be sure, until he is found out.

PASSENGER flights on a 100-h.p. machine sounds attractive.

VISITORS to Hendon may be able to indulge shortly.

THE Grahame-White "pusher" biplane exhibited at the last Olympia Aero Show will in all probability be somewhat altered and put into commission again.

GLAD to hear it. It did seem a pity to discard this machine without giving it a thorough trial. It embodied a good many novel features.

As nearly as one can judge from an inspection of the 'bus few alterations should be necessary to turn it into a very serviceable passenger carrier. If the tail booms are slightly lengthened, and possibly the wings shifted a little, the balance should be about right.

VERY astonishing to the uninitiated and very interesting to those privileged to watch, was the unique demonstration presented for the edification of Major-General Sir Sam Hughes and his staff at Messrs. Vickers' flying ground on August 9th. Commander Sir A. Trevor Dawson, R.N., vice-chairman and managing director, welcomed the visitors, who saw some exhibitions of Fokker fighting on Vickers gun 'buses, while Raynham and Barnwell on the scouts gave a magnificent display, not forgetting the looping. We know those Vickers 'buses and so do the Boche flyers!

Is the aeroplane as we know it to-day the right solution of the problem of flight?

ARE all other forms of lift doomed to failure?

PERHAPS the direct lift or helicopter is, but what about the ornithopter or wing-flapping machine?

IF a man can lift some 80 lbs. by flapping a pair of wings, how much will a petrol engine lift per horse-power?

THINK it over.

THERE appears to be something in the Passat wing-flapping machine, and since its original debut it has passed quite beyond the wild freak machine stage. Only shows what solid conviction and consistent perseverance will do. It is only at present a decent sized crude model, but the lift is there, the power of forward motion appears to be, whilst after a short demonstration controllability and the ability to glide seem not impossible.

Is the "flapper" to be the solution to the call for increased power upon power after all? Who knows?

HAWKER gave a pretty exhibition of flying over the Karsino during the entertaining there, by the Lord Mayor, of wounded soldiers.

BANKING and looping were just the things the "Tommies" wanted to see.

"THEY do that out there, over the German lines," said one. "Wouldn't care about their job, myself. Give me a nice safe trench."

UNDERSTAND that "some" flying can be seen in the neighbourhood of Coventry; banking and looping and what not, day by day, "Moore and Moore."

ONE of ours home from the front endorses the general opinion of our R.F.C. He says "They are 'some' b-boys."

WHO will be the first to solve the problem of putting the "beef" into an engine at great heights?

How can it best be done?

FORCED induction of some sort *appears* to be an easy way out of the difficulty, but if it is as simple as it looks, why hasn't it been done already?

ARE the Germans using it on some of their Fokkers? At any rate they are in all probability using it on their Zepps., where a reservoir with air maintained under pressure can easily be installed; in fact, probably already is, for keeping up the pressure in the ballonnets.

At a height of a little over 20,000 ft. the density of the air is only half of that at sea level. In other words, if the engine maintains its power at that altitude and the propeller gives the same efficiency, you travel twice as fast. Isn't it worth trying for?



SPECIAL CONSTABLE (To young mother in night attire at the window): "Be calm, madam. They've driven off the Zeppelins."

YOUNG MOTHER: "Oh, Constable, dare I venture to take baby out of the safe?"—*Punch*.

PASSENGER flights are booming at Bournemouth.

THE wind had a grudge against Manton last Saturday, for the worst spasms indicated on the wind gauge coincided exactly with Manton's turns up with passengers.

ROCK-A-BY Manton, up in the sky,  
When the wind blows, it's your turn to fly.  
When the flight's over, the wind it will fall,  
Up will go Pashley, Winter, and all.



## "MOTHERS' DAY."

MR. J. A. WHITEHEAD, of the Whitehead Aircraft Company, Richmond, is to be congratulated upon the successful result of "Mothers' Day," which was celebrated last Tuesday week, when Mrs. Whitehead and himself entertained some 300 or 400 mothers of soldiers and sailors at Hanworth Park, Feltham. It is unnecessary to say that the mothers thoroughly enjoyed their day's outing, for with Mr. Whitehead as host things could not be otherwise; from which it will be gathered that everything was thought out and executed with characteristic "Whitehead thoroughness." Mothers from all parts of London were conveyed by brakes, motor char-à-bancs, and cars to Hanworth Park, where a sumptuous lunch awaited them. After the repast various kinds of sports were put up, for which many prizes were offered. Aviation had its full share of the proceedings, for throughout the afternoon numerous machines flew over the grounds from a neighbouring aerodrome, whilst the event of the afternoon was the appearance of H. Sykes, with Mr. Paterson, on the Martinsyde from Hendon. On arriving over the grounds he executed a number of loops and tail slides, much to the delight of the spectators, and then the excitement commenced. It was originally intended that he should land in a field adjoining the park, but as this field was rather small and surrounded by trees, to say nothing of the unfavourable direction of the wind, this was by no means an easy matter. After several very plucky attempts, Sykes wisely abandoned all thoughts of landing there, and flew over the tree-tops, and we saw him descend out of sight some

THE U.S. National Advisory Committee has appointed Prof. Charles E. Lucke, of Columbia University, Chairman of a Committee to ascertain the carburettor best suited for aircraft work, with a view to standardisation.

SINCE February, 1915, employees in the older branches of Boulton and Paul have maintained two beds for wounded soldiers at Norfolk and Norwich Hospital. The aircraft and other employees now propose to join in and maintain two more beds.

B.P., the new house organ of Messrs. Boulton and Paul, has made a most auspicious start, and should do much in furthering the clan spirit among the workers. It is evident that the staff of the firm includes several who can use pen and pencil to effect, and their efforts to interest and amuse should be fully appreciated month by month.

few fields away. It was not without some anxiety as to his safety that some of us ran across-country to where he disappeared from view, so we were much relieved, on arriving at the field in which he had landed, to find pilot, passenger, and machine intact. A policeman being put on guard over the machine, Sykes was conveyed back to the park in triumph, where he was received by Mr. Whitehead, who made a stirring speech to his guests on the importance of Britain's supremacy of the air, and also thanked the pilot for his flying visit and exhibitions. Then came tea, after which the sports were brought to a conclusion, and Mrs. Whitehead presented the prizes. "Mothers' Day" being also Mr. Whitehead's 41st birthday, the employees of the company made a presentation to their chief, which took the form of a rose-bowl with the following inscription engraved on it:—"Presented to J. A. Whitehead, Esq., at Hanworth Park, on his 41st birthday, 8th August, 1916 (now known as Mothers' Day), by the employees of Whitehead Aircraft, whose names are inscribed hereon, as a mark of appreciation of his kindly thought and friendship towards all employees, who wish hereby to express their loyalty to their chief and their intention always to work for the best interests of Whitehead Aircraft." There were the names of about 1,000 employees on the bowl! The staff also presented a silver dessert service, and the complete Bombay edition of Rudyard Kipling's works. Many will remember "Mothers' Day." May there be many other such days, equally successful in the future.



Mothers' Day at Hanworth Park—Mr. Whitehead examining the silver rose-bowl which was presented to him by 1,000 of his employees. Mrs. Whitehead is seated on the left.

# Personals

## Casualties.

Second Lieutenant L. LATIMER CLARK, R.H.A., attached R.F.C., the only son of Mr. Lyonel Clark, M.Inst.C.E., M.Inst.N.A., and Mrs. Clark, of 105, Grosvenor Road, S.W., was born in 1898. He joined the Inns of Court O.T.C. in March last year, was gazetted in August to the Leicestershire R.H.A., and was attached to the R.F.C. as observer last spring. He went with his squadron to the front six weeks ago, and got his Observer's wings after a successful reconnaissance in which he brought down a Fokker. He was on similar duty on August 2nd, when his machine was hit by anti-aircraft fire, and crashed down behind the enemy's lines. He was educated at Bedales and Claysmore Schools.

Second Lieutenant HUGH COURTNEY DAVIS, Royal Berkshire Regiment, attached R.F.C., was the youngest son of Mr. and Mrs. E. C. Davis, of Dalhousie Square, Calcutta. He was in his twentieth year, and was educated at Oundle, where he held a scholarship. Here he gained distinctions in football, cricket and hockey. In the spring of 1915 he received a commission in the Royal Berkshire Regiment, and last March he was attached to the R.F.C. and received his wings in July. He went to the Front on August 1st, and met with a fatal accident on returning to his aerodrome on August 5th.

Commander HUMPHREY FINCH DAWSON, R.N., whose death is officially announced as having taken place at the Naval Hospital, Chatham, was 40 years of age, and entered the Navy in January, 1890. He was sub-lieutenant on board the "Thrush" during the Sierra Leone trouble of 1898, and was employed in keeping open the lines of communication in the Sherbro district. During the South African War he served on the Delagoa Bay blockade as lieutenant in the "Widgeon," and afterwards patrolled the south coast of Cape Colony, receiving for his services the South African medal. Commander Finch Dawson, who had specialised in navigation, retired in May, 1912, but had latterly been attached to the Royal Naval Air Service.

Captain WILLIAM ASSHETON SUMMERS, 18th Hussars and R.F.C., who is believed to have been killed by a direct hit from an anti-aircraft gun on August 1st, was the eldest son of Mr. and Mrs. F. B. Summers, of Froyle Place, Alton, and was 20 years of age. He was educated at Eton and Sandhurst, and received a commission in the 18th Hussars in March, 1914, and went out with his regiment in the early days of the war. He transferred to the R.F.C. in May, 1915, and was promoted flight-commander in March, 1916. On July 28th he was awarded the Military Cross. His Brigadier writes: "Your boy was quite the most stout-hearted in a very brave lot of pilots, and our superiority in the air here is largely due to him and to the example he set to others. I had his name down for further reward for his extraordinarily fine work in this battle."

News has come to East Yorkshire of the death in one of the base hospitals in France of Lieutenant DAVID WILSON, of the R.F.C., previously of the East Yorkshire Regiment, who succumbed to injuries suffered during a flight on Sunday, July 30th. He was awarded the Military Cross in May of this year, and had just been posted flight-commander and detailed for duty with another squadron, being under orders to transfer the next day. He was the son of the late Rev. David Wilson, and a nephew of the first Lord Nunburnholme and of the late Mr. Arthur Wilson, of Tranby Croft, East Yorkshire.

Second Lieutenant GERALD LOVELL BACKHOUSE, Norfolk Regiment, attached R.F.C., who was killed on August 2nd in a flying accident, was the second son of Mr. and Mrs. H. C. Backhouse, of 14, Ailesbury Road, Dublin, and Dundalk. He was educated at Shrewsbury, where he was in the O.T.C. He went to Sandhurst, and was gazetted to the Norfolk Regiment at the age of 17. He was later attached to the R.F.C. His commander, in a letter to Lieutenant Backhouse's friends, spoke in the highest terms of his ability.

Second Lieutenant C. DE FRECE, who met his death last week in the regrettable collision in mid-air recorded elsewhere, was the only son of Mr. Alfred De Frece, solicitor, 2, Devonshire Square, E.C., and was barely 19 years of age. Educated at the Haberdashers' School, Taplow, the London Grammar School, and Brussels, he was intended to become an electrical engineer, and to that purpose was a pupil of Professor Silvanus Thompson. In October of last year, shortly after his eighteenth birthday, he joined the Middlesex Yeomanry, and in June obtained a commission in the R.F.C. He was regarded as a very promising flight officer.

Lieutenant GEORGE ROGERS, who was the unfortunate pilot of the machine which met with the collision in mid-air last week, was a member of a well-known Canadian family, his home being at Barrie, Ontario. He was a member of the Canadian Expeditionary Force, 23 years of age, and a pilot of considerable experience and skill.

Second Lieutenant MARTYN TULLOCH VAUGHAN-LEWES, Welsh Regiment and R.F.C., who died on July 22nd from injuries received in a flying accident on July 15th, was the son of the late Captain Price Vaughan-Lewes, R.N., C.B., D.S.O., and Mrs. Vaughan-Lewes, Glenroy, West Lulworth. He got his commission in the Welsh Regiment in August, 1914, and went to the Front in the spring of last year, and was wounded. On resuming duty he was attached to the R.F.C.

## Wounded.

When pursuing a Fokker machine, at a height of 12,000 ft., Second Lieutenant JOHN BERNARD HINCHCLIFF, attached to the R.F.C., stood on his petrol tank the better to obtain a view of his foe, and was struck in his back by a piece of shrapnel, fired from an anti-aircraft gun. He is now in hospital in London. Lieutenant Hinchcliff is the only son of Mr. and Mrs. John Hinchcliff, residing in Carleton Grove, Pontefract.

## Married and to be Married.

An engagement is announced between Capt. N. A. BOLTON, R.F.C., eldest son of Mr. and Mrs. Bolton, Highcroft, Sutton, and ETHEL, younger daughter of Mr. and Mrs. Thring, 1, Springfield Place, Bath.

The marriage arranged between Captain IAN DUFF, of the Dorsetshire Regiment and R.F.C., and Miss KATHLEEN CHINNERY-HALDANE, will take place at 2 p.m. on August 30th at St. Mary's Cathedral, Edinburgh. All friends will be welcome at the church and afterwards at the Roxburgh Hotel, Charlotte Street.

A marriage has been arranged, and will take place at noon on September 14th, at the Chapel Royal, Savoy, between Flight-Lieutenant CECIL H. HAYWARD, son of the late Mr. James Hayward and Mrs. Hayward, of Ceylon, and Neroberg, Ventnor, I. of W., and DORIS, youngest daughter of the late Mr. and Mrs. ARTHUR GARD, of Belvedere, Kent, and Uplands, Ealing.

An engagement is announced between Captain E. F. NORRIS, R.F.C., only son of the late Lieutenant-Colonel E. E. NORRIS, R.F.A., and of Mrs. Norris, Harrow Weald, and ILEENE, only daughter of Mr. and Mrs. HENRY ASTE, of Carlton Hill, N.W.

Second Lieut. WILLIAM WITCOMB STAINER, R.F.C., only son of Mr. and Mrs. W. J. Stainer, of Hove, Sussex, was married at Christ Church, Edinburgh, on August 12th, to BEATA GWENLLIAN, younger daughter of Mr. and Mrs. W. KILMISTER, of Edinburgh.

An engagement is announced between Major SANDFORD WYNNE-EYTON, R.F.C., younger son of Col. Wynne-Eyton, of Plas-Issa, North Wales, and FRANCES, only daughter of Mr. and Mrs. CARBUTT, of 122, Westbourne Terrace, W.

## Items.

Included in the party of British prisoners from Germany, which arrived at Berne from Constance on August 12th, was Capt. F. WILSON, R.F.C. He has gone to Murren.



# AIRCRAFT WORK AT THE FRONT.

## OFFICIAL INFORMATION.

### British.

*Admiralty, August 8th.*

"On July 30th, in conjunction with the French, an attack was made by British naval aeroplanes on the benzine stores and barracks at Mulheim. The machines met with very heavy anti-aircraft fire, but succeeded in gaining their objective, and carried out a successful bombardment. Our machines returned safely."

*War Office, August 8th.*

"A bomb attack by aeroplanes over Port Said and Suez inflicted little material damage, and caused slight casualties."

*General Headquarters (France), August 8th, 1.45 p.m.*

"An enemy squadron of 10 aeroplanes endeavoured to cross our lines yesterday on a bombing expedition. They were cut off by one of our offensive patrols of four machines. The enemy machines scattered and returned precipitately, pursued by our patrols. Two of the hostile aeroplanes had to make forced descents behind their own lines."

*Admiralty, August 9th.*

"At daybreak this morning, under heavy fire, an attack was carried out by naval aeroplanes upon the enemy airship shed at Evere, near Brussels. The objective was successfully bombarded from a height of 200 ft., and eight bombs were observed to hit the shed. Heavy columns of white smoke were seen to issue. Our machines returned safely."

*General Headquarters, August 9th, 10.12 p.m.*

"As a result of aeroplane co-operation with our artillery several enemy guns have been destroyed and some magazines exploded. A train was set on fire by bombs dropped from our aeroplanes."

"Hostile aircraft have been more active, but have obviously been trying to avoid combats. Several enemy machines were, however, damaged by our aeroplanes and infantry fire."

*General Headquarters, Aug. 10th, 9.40 p.m.*

"Our aeroplanes continued bombing operations against the enemy's billets and other points of military importance."

"In the course of many aerial combats yesterday several enemy machines were driven down in hostile territory, and three of ours have not returned."

*General Headquarters, Aug. 11th, 10.55 p.m.*

"In addition to numerous daily raids successful long-distance raids have recently been carried out by the Royal Flying Corps against the following objectives: The Zeppelin sheds at Brussels; railway sidings at Mons; railway sidings and airship sheds at Namur; Busigny railway station twice; Courtrai railway station twice. Of the 68 machines in all which took part in these raids only two failed to return."

*General Headquarters, Aug. 13th, 10.17 p.m.*

"North of Pozières the enemy were observed by an aeroplane to be concentrating in large numbers behind Mounauet Farm. Artillery was directed on them and was seen to be very effective, the enemy scattering wildly in all directions. No hostile attack developed."

"Yesterday the Royal Flying Corps carried out another long-distance raid, and great damage was done to some railway works and sidings. Several short raids and reconnaissances were undertaken with good results. Hostile aircraft, though fairly active, avoided combat. We drove down one enemy machine and one of ours is missing."

*General Headquarters, August 14th, 9.50 p.m.*

"Yesterday the Royal Flying Corps carried out much successful work with the artillery and infantry and several bombing raids, including three separate attacks on a hostile aerodrome. One of our machines is missing."

### French.

*Paris, August 8th. Evening.*

"One of our pilots in the course of a reconnaissance brought down a German machine, which fell in flames in the enemy lines to the north of Auberive. About 9 o'clock last night an enemy aeroplane dropped four bombs on Nancy. Five civilians were wounded, three seriously."

*Paris, August 9th. Afternoon.*

"One of our pilots pursued a German machine over Lunéville, and forced it to descend in front of our lines. Our artillery destroyed the machine on the ground."

"On the Somme front our airmen fought numerous combats."

Six enemy machines, seriously hit, came down suddenly in their lines, and one enemy captive balloon was destroyed."

"During the night of August 8th-9th one of our aeroplanes, with a pilot and bomb-dropper on board, dropped bombs on the powder factory at Rottweil, on the Neckar; 150 kilos. of explosives were dropped on the buildings, where two great fires and several explosions were observed."

"Our airmen, who left at 8.30 p.m., returned at 11.55, after having accomplished in the night a raid of 350 kiloms. (219 miles), rendered particularly difficult by the crossing of the Vosges and Black Forest."

"In addition, during the same night our bombarding squadrons dropped 44 bombs on the stations of Audun-le-Roman, Longuillon and Montmedy, and 66 on the railway at Tergnier and the station at La Serre."

*Paris, August 9th. Evening.*

"The French machine which bombed the powder factory of Rottweil was flown by Adjutants Buron and Emmanuelli."

*Paris, Aug. 10th. Afternoon.*

"On the Somme front our aeroplanes fought 15 engagements yesterday. A German machine was brought down between Herly and Rethonvillers. Two other enemy machines were forced to come down after a fight in the region of Combles. Yesterday and last night our air bombing squadrons carried out the following operations:

"Ninety bombs were dropped on the railway stations on the Lassigny-Combles front (Somme), 138 on the railway station of Duguey, 40 on the station of Appilly, 38 on a battery in action in the region of Noyon, 15 on the station of Bazancourt (north-east of Rheims), 92 on the stations of Spincourt and Damvillers and on the surrounding bivouacs (region of Verdun), making in all 413 projectiles."

*Paris, Aug. 11th. Afternoon.*

"On the night of Aug. 9th-10th our air squadrons bombarded the railway station and barracks of Vouziers and the railway station of Bazancourt."

*Paris, Aug. 11th. Evening.*

"On Aug. 8th an enemy aeroplane was brought down in flames in our lines to the south of Douaumont by a pilot of the American squadron."

"Balkans.—Yesterday evening nine of our aeroplanes dropped bombs on the station at Strumitza, and this morning on 10 enemy camps north of Doiran."

*Paris, August 13th. Afternoon.*

"The aviator Lenoir yesterday brought down his seventh enemy aeroplane, which fell near Gincrey (Meuse) in the German lines. Last night our bombarding squadrons dropped 120 large bombs on the railway station of Metz-Sablons, the railway workshops and barracks in Metz itself."

*Paris, August 14th. Evening.*

"Yesterday evening enemy aeroplanes dropped bombs, including several of an incendiary character, on the town of Rheims, while the German batteries were firing on different quarters of the town. The civilian hospital adjoining the St. Remy Church and a dispensary were destroyed. Six civilians were killed."

### Russian.

*Petrograd, August 9th. Evening.*

"In the region of Friedrichstadt our aviator, Ensign Tisvenko, with an observer, Kondriunakov, undertook a reconnaissance. Notwithstanding the enemy's artillery fire and an attack by a German Albatros, Tisvenko fired at the enemy and, forcing him to flee, continued scouting. Our machine was hit, however, by the enemy's artillery fire, and fell in a burning condition into the enemy's line. The fate of the aviator and his observer is not known."

*Petrograd, Aug. 10th. Afternoon.*

"On Aug. 9th an aerial fight took place between two of our seaplanes and three enemy seaplanes. Our Lieut. Garkovenko, approaching near to an enemy machine, fired at it with his machine-gun, and forced the German to land on the shore. We suffered no losses or damage."

*Petrograd, August 13th. Evening.*

"In the region of Novogrudok, Gorodishche, Stolbicy, enemy aeroplanes flew over our positions. Ten bombs were dropped on the dressing station in the hospital in the village of Adamov (to the west of the town of Mir). A German

aeroplane which appeared over the town of Nesvij was attacked in the air by our aviator, Staff Capt. Kruten, and was brought down after a brief fight. The machine and the occupants were captured by us."

*Petrograd, August 14th. Afternoon.*

"Near the little town of Siniavka, at the Priamur Hospital, two sisters and one hospital orderly were killed and two sisters wounded by a bomb dropped from an enemy aeroplane."

## Italian.

*Rome, August 8th.*

"Last night one of our airships bombarded the railway junction of Opcina (just north of Trieste, on the supply line to the Isonzo), dropping a ton of high explosive. Good results were observed. In spite of the fire of numerous anti-aircraft batteries and the attack of two hostile seaplanes, the airship returned safely to our lines."

*Rome, August 10th.*

"A squadron of 18 Caproni aeroplanes, escorted by Nieuport machines, raided the supply stations of Peravacina and Dorberg. More than 3 tons of high explosives were dropped on the railway station and on the military depôts. Good results were observed. Notwithstanding the intense fire of anti-aircraft batteries and the attacks of hostile aeroplanes, one of which was brought down, the squadron returned safely. Hostile aircraft dropped bombs on Venice. Two persons were killed and some damage was done."

*Rome, August 11th.*

"Enemy aircraft dropped bombs on Venice and on the Grado lagoon. Buildings were damaged, but none was hurt. A squadron of our Voisin machines yesterday renewed the bombardment of Prebacina railway station, where material from the lost position was being evacuated. The aviators eluded the fire of the anti-aircraft artillery, and returned safely after dropping 40 bombs on the station, which was completely destroyed."

"The Austrians declare that during the night of Aug. 9th some seaplanes dropped bombs on Venice, aiming at the station, factories, and military establishments. In point of fact, the military establishments and the railway line only sustained negligible damage, and among that inflicted on property having no military importance the most serious is the damage caused to the church of Santa Maria Formosa, which was completely destroyed."

*Rome, August 12th.*

"Last night enemy aircraft raided Grado. No damage was done to inhabitants or buildings."

"With regard to the air raid on Venice about 10 o'clock on Thursday evening, the Austrian *communiqué* reports that several points of a military character were effectively and certainly struck. As a matter of fact, the bombs thrown only caused small outbreaks of fire in the town, the most important of which was the one which broke out in the dome of the church of San Pietro di Castello."

"The daring raid of our aviators on the torpedo factory at Fiume on August 1st deserves to be noted particularly, because it was one of the most brilliant actions of aerial warfare, and one which caused the enemy very heavy damage in a strictly military sense. As is known, on the sea front of Fiume, three kilometres west of the town, there stand buildings occupied by the Whitehead torpedo and submarine factory, a machine factory, and the Danube Shipbuilding Yard."

"These were the objectives of the raid. The operation was studied with great care, and was accomplished with the customary daring of our airmen. At dawn on August 1st, 19 Caproni machines, escorted by a squadron of Nieuport chasers, left their aerodrome, divided in groups, crossed the Gulf of Trieste, and, flying over the narrow part of the Istrian Peninsula, reached their goal. Having descended to a suitable height, despite the fire of numerous anti-aircraft batteries on the heights around Fiume, from Volosca, and from ships which emerged from the port, our daring aviators dropped 4 tons of explosives on their targets, and returned to their bases undamaged, except one Caproni machine, which landed near Volosca."

"News from a trustworthy source shows that the effects of the raid were terrible. The enormous reservoirs of petroleum on the beach were blown up, and destroyed all the buildings near the torpedo factory, while three sheds were completely ruined, with the complicated and delicate machinery inside them. Less severe—but nevertheless very

serious—was the damage done to the Danube Shipbuilding Yard. The impression caused by this raid in Austrian naval and military circles was enormous, as no one expected an attack on such a scale, and so terrible in its effects."

"With the innate barbarity, and in conformity with his savage traditions, the enemy replied to our attack with a bombardment of Venice, aiming, as usual, at buildings of artistic value rather than at military establishments. Happily this double enemy raid only caused two victims."

*Rome, August 13th.*

"Enemy aircraft last night dropped a large number of bombs on Grado and Campalto, wounding three sailors. One of our small dirigibles was burnt, and some private houses were damaged."

"On Friday the commander of the enemy fleet announced that during the raid on Venice by a squadron of Austrian aeroplanes on the night of August 10th-11th, direct hits were obtained on one of our aviation sheds. This news is absolutely false. Not a single bomb was dropped on the place or in the immediate neighbourhood, and no damage to our aeronautic material therefore is to be deplored."

*Rome, August 14th.*

"Last night hostile aircraft dropped bombs on Monfalcone and other places on the Lower Isonzo. No damage or casualties are reported."

## German.

*Berlin, August 8th.*

"A British aeroplane fell into our hands south-east of Cambrai."

*Berlin, August 9th.*

"The results of aerial fighting during July were: German losses: In air fights, 17; shot down from the ground, 1; missing, 1; total, 19. French and British losses: In air fights, 59; shot down from the ground, 15; by involuntary landings in our lines, 6; in attempts to land spies, 1; total 81, of which 48 are in our possession."

*Berlin, August 10th.*

"In an aerial fight and by means of anti-aircraft gunfire two enemy aeroplanes were shot down south of Bapaume, and one south of Lille, one near Lens, and one near Saarburg (Lorraine)."

*Berlin, August 11th.*

"During the night of August 7th-8th, a hostile aviator dropped several bombs on Rottweil, in Württemberg. No military damage was caused. One house was hit and several persons were injured."

"The Admiralty Staff announces that a squadron of our seaplanes successfully attacked British monitors and light naval forces off the Flemish coast with bombs on August 9th, and obtained several clearly observed hits. The same day the Russian aeroplane stations of Arensburg and Lebara, on the island of Oesel (Gulf of Riga) were attacked by several German air squadrons, with good results. A number of hits were observed. An aeroplane hangar was badly damaged and the roof collapsed. Of the enemy aeroplanes which ascended to defend the stations one was obliged to descend. In spite of the heavy fire of the British and Russian forces in these engagements, all our aeroplanes returned undamaged."

*Berlin, August 12th.*

"During the past few days our aerial squadrons have found noteworthy objectives for their activity in the Kovel-Sarny railway line and the extensive troop encampments north of same, on which they have freely dropped bombs. A Russian aeroplane was shot down in an aerial fight north of Sokul."

*Berlin, August 13th.*

"A British biplane was brought down south-west of Bapaume."

"Lieut. Frankl, who participated in a successful air fight on August 9th south of Bapaume, has received from the Kaiser the Order Pour le Mérite."

## Austrian.

*Vienna, August 4th.*

"With the army of General-Colonel Terezyamsky.—One of our aviators brought down an enemy Farman biplane in this region the day before yesterday."

*Vienna, August 8th.*

"A squadron of seaplanes on Monday night successfully dropped a large number of very heavy, middle-sized and incendiary bombs on the hostile battery positions at the mouth of the Isonzo and the hostile seaplane station of Gorgo. Our seaplanes were violently bombarded, but returned undamaged."



"On August 6th Naval Lieut. Banfield shot down an Italian Caproni aeroplane, after a long aerial fight at an altitude of 2,700 metres above the Gulf of Trieste. The Caproni machine was burned. Lieut. Banfield killed a non-commissioned officer and seriously and slightly wounded respectively the other occupants of the aeroplane."

*Vienna, August 10th.*

"Last night a seaplane squadron successfully bombarded the enemy seaplane station at Gorgo, near Grado. Several full hits were obtained. In spite of a very heavy bombardment our seaplanes returned safely."

"The visit to Fiume by the Italian large battle-aeroplane on the first of this month was returned by our squadrons, consisting altogether of 21 seaplanes, on the night from the 9th to the 10th inst., by a visit to Venice, where the arsenal, railway station, military objects, and factories were bombarded with ravaging results;  $3\frac{1}{2}$  tons of bombs in all were dropped, and about a dozen fires were caused, two of which were of very large dimensions, at the cotton mills in the town, which could still be seen at a distance of 25 miles. The fierce anti-aircraft fire from the enemy batteries was entirely without effect. All our aeroplanes returned unharmed."

*Vienna, August 11th.*

"During the night from the 10th to 11th inst. our hydroplane squadrons repeated their attack on Venice."

"The arsenal railway station, the outer works, and outer forts were freely bombed. Good results and fires were clearly

observed at the arsenal and at the railway establishments, in spite of the thunderstorm which was raging."

"One direct hit was made on the airship shed at Capalto. Further, the batteries in Grado and at the mouth of the Isonzo were successfully bombarded. Notwithstanding very unfavourable weather and the violent anti-aircraft fire of the enemy, all our aeroplanes returned unharmed."

**Turkish.**

*Constantinople, August 8th.*

"One of our airmen on July 24th (Turkish date) forced an enemy aeroplane to descend in the neighbourhood of Muhamadie, and destroyed it. Our aeroplanes successfully pelted with bombs the harbour of Ismailia and buildings there. The enemy cavalry, which on July 22nd (Turkish date) attacked us in the defile of Abudjera, east of Suez, was repulsed after eight hours' battle. Rifles and bayonets were captured."

"Some enemy ships which arrived off Tcheshme, and from which an enemy aeroplane went up and dropped some bombs on the coast, finally all retired in the direction of Chios."

*Constantinople, August 10th.*

"On July 22nd the enemy lost three aeroplanes in an air fight and by our anti-aircraft guns. In the vicinity of Mohamedie and Romani our air squadron successfully bombed the enemy's camp."

*Constantinople, August 14th.*

"It has been ascertained that during our last air attack on Suez, apart from other damage caused by our bombs, two petrol stores and one aeroplane shed were destroyed. Three English officers were killed at Ismailia."

### From Other Sources.

The *Echo Belge* on August 8th reported that the previous week Mons Station had been bombed by the French.

Mr. G. Ward Price, writing from Salonica on August 6th, says:—

"A German aeroplane which was yesterday flying from the aviation station at Monastir was obliged to come down owing to engine trouble in the Serbian lines. Both airmen were made prisoners."

The *Petit Parisien*, writing on August 8th regarding the situation on the Somme, says:—

"The Germans, plainly disquieted by our bombardment, have attempted numerous aerial reconnaissances, but the enemy airman have been unable to cross our lines."

An Exchange message from Rome on August 8th says:—

"On the night of the 5th and during the 6th Italian torpedo-boats carried out demonstrative actions against the Austrian coast between Duino and Miramare, during which they were attacked by enemy aircraft, which, however, did not cause them any damage."

The Central News correspondent in Paris, writing on August 8th, says:—

"The Germans, for their part, are manifesting signs of the greatest perturbation at the prospect of a renewal of the Allied offensive. Besides endeavouring to reply to the Allied guns, they are seeking by means of their aviators to locate the region of the probable attack, and making an effort to find out where our concentrations are most formidable. The airmen, however, have been unable to perform any useful work owing to the vigilance of their French and British opponents, who effectively maintain the freeway of the air, and have brought down several hostile craft within the last two days."

Mr. W. Beach Thomas, writing to the *Daily Mail* on August 7th, says:—

"One of the most satisfying sights to be found in the ground taken from the enemy is the utter wreckage of one of his batteries—gun, emplacement and surroundings—between Pozières and Contalmaison. It should be left there as a permanent monument to our gunners and our airmen working hand-in-hand."

"This is not, of course, the only such relic. Mametz Wood, to give one instance, still harbours gun wreckage in quantity, but this particular broken battery boasts some spectacular virtues of its own and points the moral of the meaning of a master air service. On occasion when the light was good our airmen have guided the firing at as many as 80 such targets within the day. They have seen in our neighbourhood no fewer than seven gunpits destroyed within the day by our heavy guns, and throughout this offensive their courage,

activity and skill in observation have been the chief agent in knocking out one German battery after another."

"Sometimes they are disturbed by other aircraft as well as by Archies. The other day five German planes were seen flying high along the Albert-Baupaume road, where the chief battle was raging. Though still well over German country they were at once challenged and charged by four of our planes and sent helter-skelter. Twice lately along this same road our airmen have swooped down to a few hundred feet and fired their Lewis guns at enemy's transports and moving troops, causing something like a panic."

"During the last week our men have flown to within 20 yards of the enemy's craft in order to make sure of the shot. By such insistence on the offensive they have won the mastery, and the prize of mastery is artillery observation."

"The bombing attacks are more spectacular, especially those delivered against places as far away as Mons. In one of these a train was hit while in motion and broken in pieces. During last week such an explosion was caused by one of the hundredweight bombs that the machine, flying at a height of over a mile and a half, was bumped and rocked by the disturbance of the air. And these bombers show the same aggressive fighting quality as the fighters proper. As a rule even when flying 100 miles from their base they swing round their target to see the effect of the shot. Blind work is no good to them."

"Wherever you are along our battle front about the hour of dawn you see and hear our planes shooting out eastwards to bomb or fight or observe. They crowd enemywards like fleets of trawlers seawards; and each day they catch fish; many fish if the air is clear; a few fish if the clouds are low or the 'subsoil' covered with haze."

"Their value to the gunners is altogether beyond estimate—though I must not forget the similar services of that other denizen of the air known as Ruddy Rupert, or the kite balloon. It is, I think, not too much to say that the aeroplane has enabled us to make gunners six months quicker than we could otherwise have made them. Our 'prentice gunners have always given proof of great quickness in learning the arts of laying and fuse-setting; but firing with precision to a map is an art that needs a longer apprenticeship for all men who are not gunners born. Thanks to the airmen, the amount of such blind shooting has been progressively reduced. The 'eyes of the guns' multiply in number and increase in quality of scientific vision."

Mr. Philip Gibbs also deals with the subject in a long despatch which appeared in the *Daily Chronicle* of August 9th as follows:—

"All through the Battle of Picardy most of us have kept glancing up into the sky across the enemy's lines from day

to day, and looking for a German aeroplane. It is a rare bird. Now and again when our flying men are not out because the clouds are lying low and it is a 'dud day,' as they call it, a hostile machine sneaks through the mist and drops a few bombs and goes full speed back again; and more often, but not very often, a flight of Germans will come in a gang through a clear sky and attack one or more of our scouts if they can be sure of having all the odds in their favour. Behind their own lines they are more bold (and there is nothing wrong with their courage as individual fighters), and lie in wait in the cross-roads of the air like modern Black Knights (with the Iron Cross as their badge) to defend their territory from all intruders—not, however, with any great success—and so provide exciting combats for our own knights-errant. But across our lines they venture rarely.

"During the first week of the battle, which began on July 1st, the hostile machines were invisible, and yet during all this time of fighting we cannot go up to the lines without seeing our own aeroplanes flying above the shell-fire in German territory.

"The German 'Archies' are firing at them, ringing them round with white puff-clouds, which burst very close, so close that one hold one's breath or speaks a whisper—'They've got him!'—until a second later one can see the aeroplane skimming onwards steadily and quite careless of these explosions which follow on the trail of his wings. Below these flying men of ours shells are crashing and smoke is vomiting up, and villages are burning, and there is all the tumult of battle, but they circle round as aloof as the winged gods themselves, it seems, from all this earthly strife—yet not aloof because they help to direct the thunderbolts, as some of the old gods did.

"So far from prowling on our side of the lines, these pilots and observers make a daily habit of going for far journeys into the enemy's zone, often as far as Bapaume, which is a dozen miles beyond our own trenches, and to places like Martinpuich and Courcette and Flers. A few days ago they set Martinpuich on fire, and it was still burning when they flew over it again next day.

"On July 28th four of our aeroplanes paid a surprise visit to Mons, the scene of our earliest fighting two years ago, and reminded the enemy of our 'contemptible little army' of those days by flying low and dropping bombs on the rolling-stock in the railway station and upon sheds full of munitions. They were leisurely in their circlings, and stayed until fires had exploded at four different points and much ammunition had been blown up. Then they came home to dinner.

"Every day and all day long they are out and about, across the German lines, observing for our artillery, and directing the fire of our guns upon the enemy's batteries and other targets which they have seen below with their hawk's eyes. This work, so audaciously and skilfully done, has given us an undoubted mastery of observation, which the enemy no longer holds. The German gunners now have to shoot mostly by the map, and although they are very wise in science, it is not the same thing as being able to direct their fire by direct observation of results. Our airmen have been of vast service in the daily battle of guns, and it is largely due to their flights that our artillery has been able to destroy many of the enemy's batteries.

"One day seven batteries reported active by one machine were all silenced in 10 mins., and direct hits were made on five or more batteries.

"On July 28th one of our air squadrons controlled nine direct hits on the enemy's batteries. Those things tell. The knocking out of a German battery means less loss of life to our infantry, and a greater certainty of progress. It is the hardest blow that can be given, for this is a battle of guns, and every battery destroyed is better than the taking of a trench, or at least the easiest way to take it.

"A machine of ours ranged howitzers on a battery of two 5.9 howitzers, which were destroyed, and another machine directed guns on another battery, destroying one emplacement and causing explosions which lasted an hour.

"So the record runs from day to day, and the enemy is getting frightened for his guns and withdrawing some of them at least to safer places.

"The fearlessness of our men is not a virtue with them. It is a natural instinct. They attack unequal odds with the gusto of schoolboys who fling themselves into a football scrimmage.

"Literally the enemy is put to flight by these modern men

of ours, as when the other day one of our pilots dived at five hostile machines attacking one of our scouts, and drove them off; and as when, a day or two ago, two others attacked four Fokkers—the deadly Fokker, as it used to be called—and drove them down into their own lines.

"They are a new type of men, these pilots and observers of the Royal Flying Corps. It is difficult to place them or to account for them. They seem to have been born to fly. For the most part they are very young men—boys of 19 and 20—though older men twice their age and more are found here and there, having come out of professions like the law and the Civil Service, and taken to the air like ducks to water, but surprised with themselves. The younger men are clean-cut, fine and delicately-made fellows, as far as I know them, rather highly-strung and nervous in temperament.

"It is quite curious that many of them are men of great musical talent. In one squadron I know there are nearly 20 men who are all very full of musical talent. One of them, a stripling, came out of the trenches to volunteer as an airman, with long screeds of music which he had written down 'out of his head,' as children say, without hearing a note of it played until he came back. At night, when dusk creeps through the sky, and one by one the homing birds fly down (there is always an anxious question after the squadron commander, who is the best beloved), the flying men settle round the piano in the aerodrome, and one of them brings out his violin and plays it with a master touch, and another sings in a bass voice that might be heard one day at Covent Garden, and through the evening the men take turns at the piano, to play what comes into their heads and out of their hearts. This link between music and flight may be a coincidence in the case of one squadron (though I have heard of it elsewhere), but it may be that flight is the new music of life, and that the imagination of the younger generation is soaring upon real wings, inspired to flight by the deep chords of emotion that in earlier days went into sound and colour. The pity is that just now they are instruments of death.

"They have amazing adventures up there in the sky, and learn strange things. They learn the look of the great country below, so that every landmark is familiar to them, and any strange flash or shape is detected at once, and those things they must learn in three different scales of light, morning, afternoon and evening, because at each of those times the landscape and the shape and shadows of it are quite different. They fly above the bursting shells and the tumult of war, but hear nothing of it unless they come down very low, for the humming of their engine is a great song in their ears. But they hear the 'Archies,' which make the puff-clouds above them, and sometimes, but not often, the scream of great shells going by them. A friend of mine had a queer and frightful case of this not long ago. He was flying fairly low when he saw coming straight for him three-quarters of a ton of metal, in the shape of a shell, and heard its whining note, and was tossed, as though in a rough sea, by the rush of the wind it made. It was a shell from one of our 15-in. Grannies, and this pilot who met it on its way within 100 yards was annoyed for the moment with the gunners below who had not worried about the bird in the sky, which was my friend.

"They are humorous, keen, sensitive men, these air pilots of ours, and though some of them are very musical, they do not disdain other joys of life, like a good dinner in some good dining place behind the lines, when a 'dud day' makes flying 'off.' And for some of us, not of the air, it is better than a banquet to see these flying men and to hear them building castles in the air, and telling tales more wonderful than those of fairy lore."

The *Telegraaf* on August 9th gave a report from its correspondent on the frontier that 11 British and French airmen flew over central and south Belgium on the previous Saturday. Sunday and Monday, and threw bombs with good effect on German military works. It is stated that the German anti-aircraft guns bombarded the airmen without result. A great fire is said to have broken out in the German magazines at Aerschot, in Belgium, but details are lacking.

The *Maasbode* on August 9th published a telegram from Maastricht reporting that the French airmen who threw bombs on Metz hit the station and destroyed 10 houses in one street containing the barracks. Two Landsturm were killed on the railway Metz-Thionville, while great damage was done to a fort near Metz, 200 soldiers being killed or wounded.



### United States Anti-Aircraft Guns.

AFTER three years experimenting the U.S. Bureau of Ordnance has produced an anti-aircraft weapon which, according to the Washington correspondent of the *New York World*, is a machine rifle about 50 calibres long, capable of throwing a 3-in. shell 27,000 ft. at an angle of 90 degs. It can also deliver its charge at rapid fire rate. These guns have already been fitted on the battleships "Pennsylvania" and "Nevada," and 18 other battleships and cruisers are to be equipped with them, two guns on each vessel. They will be mounted fore and aft on the rear stands of the gun turrets.

### The First Hydro-aeroplane in the States.

THE District Supreme Court of New York has just reversed a decision of the U.S. Commissioner of Patents, and decided that priority of invention of the hydro-aeroplane in the U.S. belongs to Albert S. Janin, who produced a device for the purpose in 1909, about a year ahead of Glenn H. Curtiss, who experimented in this direction at Hammondsport in 1910.

### More Squeals from the Boche.

THERE are abundant proofs that the Boche does not like the medicine made to his own prescription. Another instance emanates from the headquarters of the Seventh Army Corps at Maintz in the form of a proclamation to farmers. This says:—

"We learn from a reliable source that an Anglo-French Flying Corps is being formed for the purpose of dropping a special kind of fire bomb on our fields as soon as our harvest is ripe and dry weather has prevailed for some time, in order to destroy our crops."

Instructions have been issued confidentially to the farmers as to means of defence.

The *Frankischer Kurier* says that the British and French flying men have already attempted to destroy the Bulgarian crops in the same way.

### Another Raid Fable.

THE following story, officially sent out from Berlin on August 12th, is so patently a fable that it scarcely needs the Official Press Bureau's footnote to the effect that "this German report is wholly untrue":—

"Contrary to the assertions of the British Government, the general conviction reigns in London that the attack on August 1st was the most serious which London has ever been through up to the present. Undeniable reports regarding the airship attack of July 28th-29th, July 31st, and Aug. 1st and Aug. 2nd-3rd, confirm that very heavy damage was caused. A hall, which was under construction, with a remount dépôt, was completely destroyed. Most of the horses perished.

"At the mouth of the Humber a lighthouse was destroyed. A small cruiser with three funnels and one mast was badly damaged. Below Grimsby two munition sheds were completely destroyed. Ships anchored between Grimsby and Cleethorpes Harbour establishments and in the neighbourhood of Cleethorpes were seriously damaged.

"The damage caused in Hull amounts to millions. Several arms and munition works were destroyed, as well as other establishments of military importance. A panic broke out amongst the population when they realised that the anti-aircraft guns could do nothing against the airships. The Harbour of Immingham has been closed on account of the extensive damage caused in the docks and the coal depôts.

"In the region of Norwich there were several cases of destruction on the railways. To the south of Cambridge a large factory was set on fire. Near Yarmouth a battery of searchlights and anti-aircraft guns was destroyed. In Harwich an airship shed in course of construction was brought down. In Dover the docks were bombarded for half an hour and fires were observed there. Woolwich and the surrounding districts were seriously damaged and several munition factories were hit. In the eastern suburb of London a cotton mill used for the manufacture of shell cases was completely destroyed. Over a 1,000 men and women have been put out of employment.

"Several large bridges across the Thames, including the footbridges of the Tower Bridge, were damaged. In the docks several warehouses and landing piers were destroyed. Ships anchored there were partly seriously damaged. In one dock numerous ships, including a large English steamer, which were supposed to take provisions to France to the troops, were destroyed by fire. Many persons were wounded, some seriously, by the anti-aircraft fire. In the Thames a torpedo-boat was hit by our bombs and sank. In Oxted,

near London, two munition factories were destroyed. The surroundings of the factories were still on fire the next day."

### An Echo of Kut.

AN indication as to the whereabouts of some of those who were taken prisoners at Kut is afforded by a message which has been received at Dorchester by the parents of Air-Mechanic S. J. Wells, R.F.C. He says he is at Angona (Asiatic Turkey), and is quite well and comfortable.

### Zeppelins and Ships.

THE Danish *Politiken* reports that the Swedish steamer "Norrland" was attacked last week by a Zeppelin near the Dogger Bank; 30 bombs were thrown, but the steamer escaped with slight damage.

### Another Zeppelin Reported Down.

A MESSAGE from the frontier to the *Telegraaf* reports that on August 10th a heavily damaged Zeppelin coming from the West landed in Belgium.

### Count Zeppelin's Night Out.

ACCORDING to the Stockholm *Tidningen*, which seems to have heard it from Berlin, Count Zeppelin was on board one of the raiders during the visit to England on August 8th-9th; but we doubt it.

### Zeppelin Raids.

SIR E. CORNWALL, in the House of Commons last week, asked the Secretary of State for War whether he proposes to make a statement with regard to the recent Zeppelin raids, whether he will state how many hours they were actually over this country in their recent visits, and at what stage of the attack does the responsibility for the defence fall upon the War Office?

Major Baird: It would not be in the public interest to add to the information already published regarding recent hostile air raids. As regards the last part of the question, the responsibility for dealing with air raiders rests with the Navy, while they are over the sea, and with the Commander-in-Chief Home Forces as soon as they cross the coast line. It is scarcely necessary to add, however, that there is close co-operation between the Royal Naval Air Service and the Royal Flying Corps, and that in practice both Services seize any opportunity of attacking the enemy whether he is over the land or over the sea.

### The Zeppelin Liners.

ENVY aroused by the crossing of the Atlantic by submarine has possibly again stirred up the Zeppelin liner idea. At any rate the Berlin correspondent of the Dutch *Tyd* telegraphs a story that a few months will see Zeppelin liners crossing the Atlantic. Trial flights of Zeppelins built for this purpose are said to have already been made over the Lake of Constance, and Count Zeppelin is credited with recently piloting one to the English coast. Their maximum speed, the correspondent adds, is 200 kiloms. (about 125 miles) an hour, and they are able to fly at such a height that no enemy air attack against them will be possible.

### Last Messages from "L 19."

THE Gothenburg *Handelstidende* states that recently fishermen at Marstrand picked up a bottle containing a despatch from Commander Lowes of the wrecked Zeppelin "L 19" (which came to grief some time ago) to his superior officer, in which he says:—

"With fifteen men on the platform and no gondola, 'L 19' is going very slowly. I am unable to save the airship. In foggy weather, we, on our return from England, passed Holland, and were bombarded by Dutch sentinels. At the same moment three motors failed. 1 p.m." The bottle also contained fifteen letters from the crew of the "L 19" to their relatives.

### German Seaplanes and Roumania.

COMING from the direction of Varna, three German seaplanes on August 11th flew over the town and harbour of Constantza. At a height of 3,000 ft. they flew along the coast for some distance evidently spying out the land. The lighthouse keeper of Tuzla reported that one seaplane released a small balloon, which fell in the sea. The inhabitants were greatly alarmed.

### Don't Like their Own Medicine.

A MESSAGE from Zurich suggests that the real reason why the Wurtemberg Royal Family and Court have recently sought a change of air at Friedrichshafen is that they fear French aviators may again attack Stuttgart, while the recent rioting among the discontented populace has not made the locality a particularly healthy one for Royalty.

## Lord Kitchener's Letter.

It was a happy idea to publish facsimiles of Lord Kitchener's now famous letter, the original of which, it will be remembered, was purchased by Mr. Fenwick Harrison for £6,000 (which sum went to the British Red Cross Society) and then presented to the Nation. The sale proceeds of these facsimiles will be passed into selected war charitable objects. To Messrs. Raphael Tuck and Sons, Ltd., has been entrusted the work of reproduction, and right splendidly have they carried out their part of the bargain. The result is a series of striking and artistic souvenirs of the late War Minister is reproduced, by special permission of the War Office, on the official letter paper of the Secretary of State for War, and is in every respect identical with the original appeal. It is placed in a cover designed by Mr. Frank Brangwyn, A.R.A., and Sir Arthur Conan Doyle has written an appropriate monograph, while a tribute to the late War Minister's work is paid by Sir George Arthur, who was Lord Kitchener's private secretary.

The facsimile is being issued in three editions—in khaki cover, 1s. net; in white Whatman cover, 2s. 6d. net; and a photogravure, 10s. 6d. net. A publisher's proof edition of the photogravure, signed and stamped, will be issued at £1 1s. net, and there will be a limited issue of an artist's proof edition, signed by Mr. Brangwyn, the price of which will be £2 2s.

Everyone should secure a specimen of this letter as a reminder of a great man and his work. At the same time there is the further satisfaction in knowing that one is helping forward the deserving cause of our heroes.

## Aviation Equipment.

No better summary could be given than these two words to the power to fill by Dunhill's, Ltd., every aviatric requirement outside the machine itself and its accessories. After a run through the Conduit Street establishment of the firm, the only query is how to choose from so extensive a stock of aviation clothing as is there assembled on view. And when you have secured what you really must have there and then, you will find there were still one or two items which, after all, you had been wise in including in the list of necessities. Very handy, therefore, is the new catalogue just issued by the firm, in which can be found in detail and illustrated very convincingly the more prominent features of which Messrs. Dunhill's, Ltd., make a speciality. A word of advice to those who from stress of circumstances cannot call personally. Write to 2, Conduit Street, for the booklet, or 'phone them Gerrard 3859.

## The Curtiss-Wright Amalgamation.

The negotiations which have been going on with regard to an amalgamation of the Curtiss and Wright interests in the States appear to have come to a standstill for the present. Apparently there is some difficulty with regard to the calculation of asset values, mainly on account of uncompleted contracts with European Governments. The matter is therefore to remain in abeyance until it is possible to make accurate estimates of values.

ANOTHER useful clip for match-boxes is to hand. This one is from the C.A.V. Company, and bears on one side a miniature of Val Prince's striking C.A.V. poster, and on the other the Allies' flags.

THOSE who take an interest in tyre economy will welcome the new hand-book on vulcanising and the care of tyres which has been put out by Messrs. Harvey Frost and Co. It costs 1s. (post free 1s. 2d.), and can be had from their West End Office, 27, Charing Cross Road, W.C.

It is two years since Messrs. Brown Brothers last issued their catalogue of accessories, components and tools, and doubtless on that account alone there will be a rush to secure copies of the 1916 edition, which is just out. The book runs to just on 600 pages, and it is well bound, so that it will stand the constant reference which it is certain to get, for there are few things which are not to be found therein. The various sections, such as accessories, tools, clothing, &c., are thumb-indexed, which makes for convenience. Send to Great Eastern Street for a copy.

THE Wright Company advise us that an error crept into the specification which they sent us of their new military tractor biplane, described in "FLIGHT" last week. The slow flying figure should have read 35 miles and not 25 miles an hour.

## UNAFFILIATED MODEL CLUBS DIARY AND REPORTS.

Club reports of chief work done are published monthly. Secretaries' reports, to be included, must reach the Editor on the last Monday in each month.

### Finsbury Park & District (66, SOUTH VIEW RD., HORNSEY).

*Monthly Report.*—July saw some of the best flying that has ever been done by this club, despite the fact that the attendances have been somewhat small. The tractor monoplane belonging to Messrs. E. Coleman and F. E. Rayner have both accomplished quarter-mile flights with a duration of between 40 and 50 seconds. On July 1st, at Parliament Hill, there was not much flying owing to the extremely high wind which prevailed. July 8th was a splendid flying day. Mr. Rayner's new Morane tractor was at work consistently throughout the afternoon with good durations. A twin-screw canard model was being flown by Mr. Coleman, but not being satisfied with its performances, he converted it into a tractor, and in this form it flew really well, reaching an altitude estimated at about 150 ft. A small high-speed mono, was flown by Mr. W. Hardinge. On the 15th, Mr. A. Richards was testing a hollow-spar machine with good results. Messrs. Rayner and Coleman were doing several quarter-miles, their machines rising to a great height, and the flights terminating with long flat glides with propeller stationary. Mr. Hardinge's small tractor was making a feature of r.o.g. flights. Mr. Coleman's hollow-spar tractor monoplane was the only machine out on 22nd, when it made several flights which exceeded quarter-mile, witnessed by Mr. B. Tear (late secretary of Liverpool Aero Research Club). On July 20th, Messrs. Coleman and Rayner were again the only members present. Their models made several fine flights of about 400 yards at an average altitude of 150 ft. These two machines are very similar in flight, and both terminated their flights with motor completely "run out." Several very realistic flights were made off the ground, rising off in a little more than their own length. Mr. A. S. Whiffin, of Bromley, visited the club and flew a small tractor mono., which, after a few minor adjustments had been made, gave good results. Owing to the development of long-distance models it has been found necessary to do most of the flying at Parliament Hill (Hampstead Heath), and Finsbury Park will be used only for testing models where comparatively short flights are desirable.

### Another Aeroplane from Australia.

It has been announced in Sydney that Mr. Kidman, the wealthy stock owner, has presented an armoured aeroplane costing £2,700 to the Imperial Government.

### An Aeroplane from Fiji.

THE natives of the Province of Rewa, Fiji, have offered £1,500 for the purchase of an aeroplane. This patriotic offer has been gratefully accepted, and the thanks of the Army Council have been communicated to the chiefs of the province.

## PUBLICATIONS RECEIVED.

*Gas, Oil and Petrol Engines.* By A. Garrard. London: Whittaker and Co. Price 5s. net.

*The Motorists' Handbook on Vulcanising and the Care of Tyres.* London: Harvey Frost and Co., Ltd., 39-41, Great Eastern Street, E.C. Price 1s.

### Catalogue.

*Accessories, Motor Tyres, Motor Clothing, &c., Tools.* London: Brown Brothers, Ltd., 22 to 34, Great Eastern Street, E.C.

## Aeronautical Patents Published.

### Applied for in 1915.

*Published August 17th, 1916.*

8,845. W. CUNNINGHAM. Aeroplanes.  
10,255. SPERRY GYROSCOPE Co. Gyroscopic stabilisers.

### Applied for in 1916.

The numbers in brackets are those under which the specification will be printed and abridged, &c.  
*Published August 10th, 1916.*

171. A. V. ROE. Tilting mechanism for tail planes of aerial craft. (100,875.)

[Owing to the enormous pressure on our space we have had to hold over the annual report of the Advisory Committee for Aeronautics and several other regular features.—ED.]

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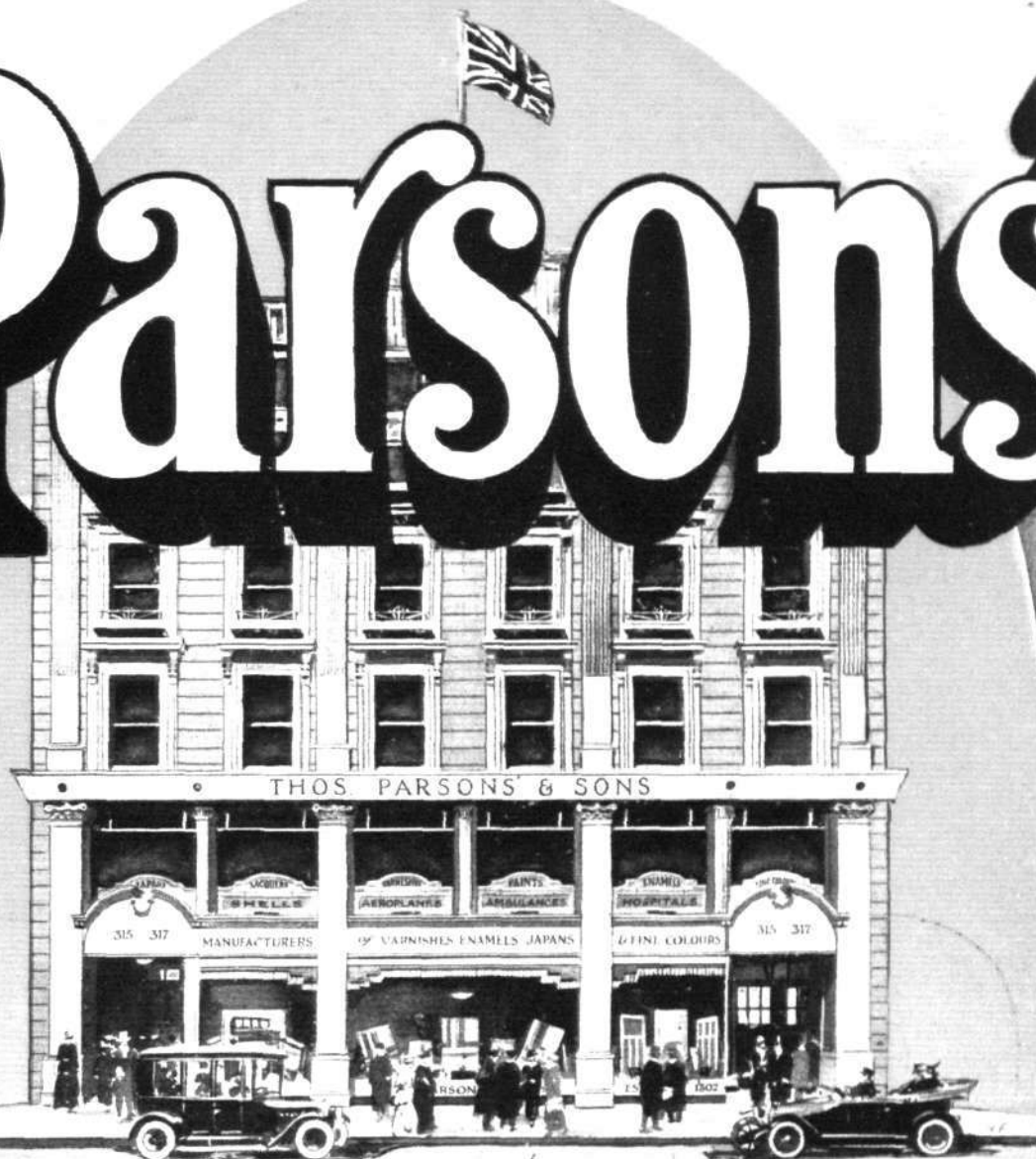
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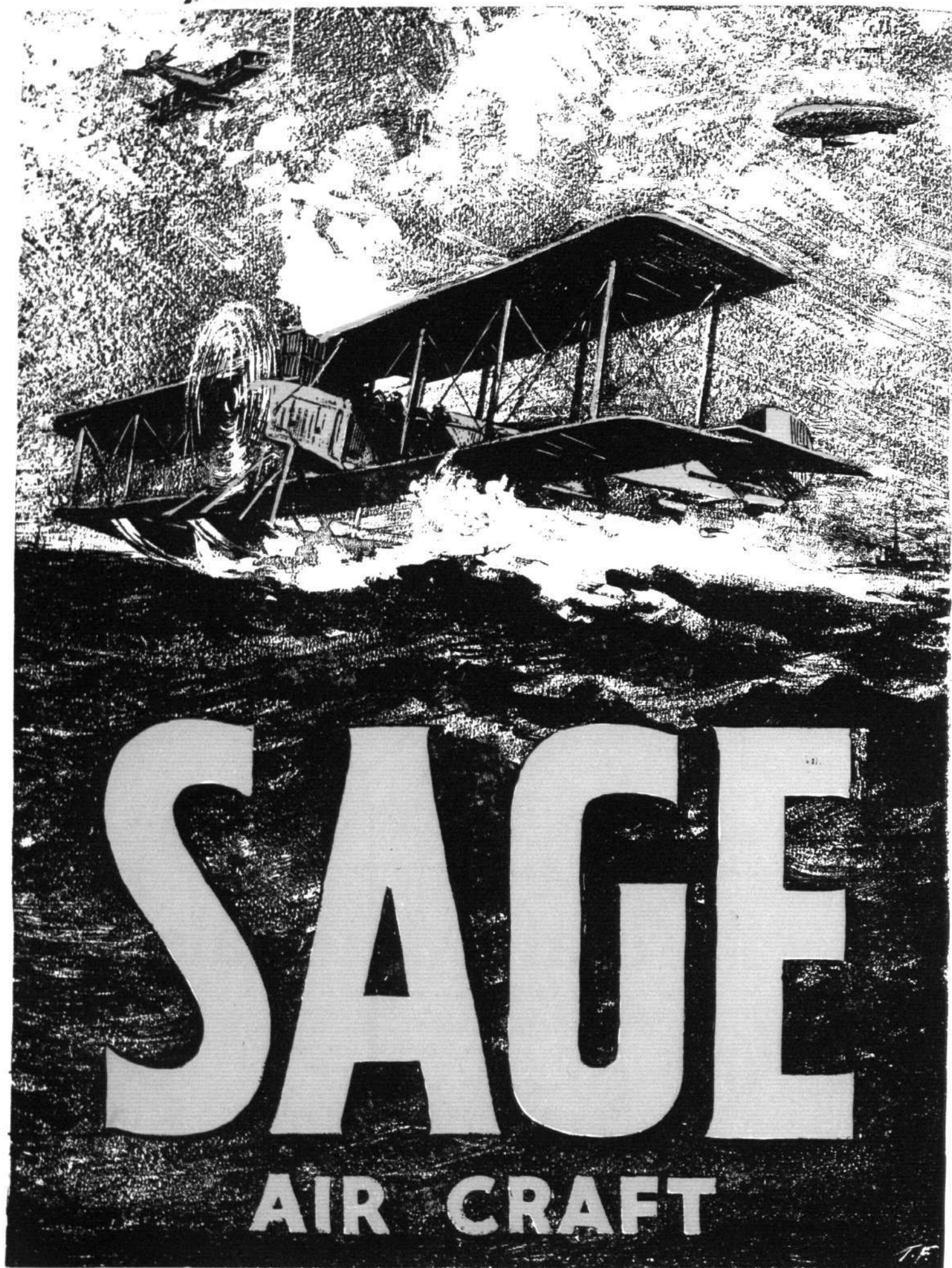
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